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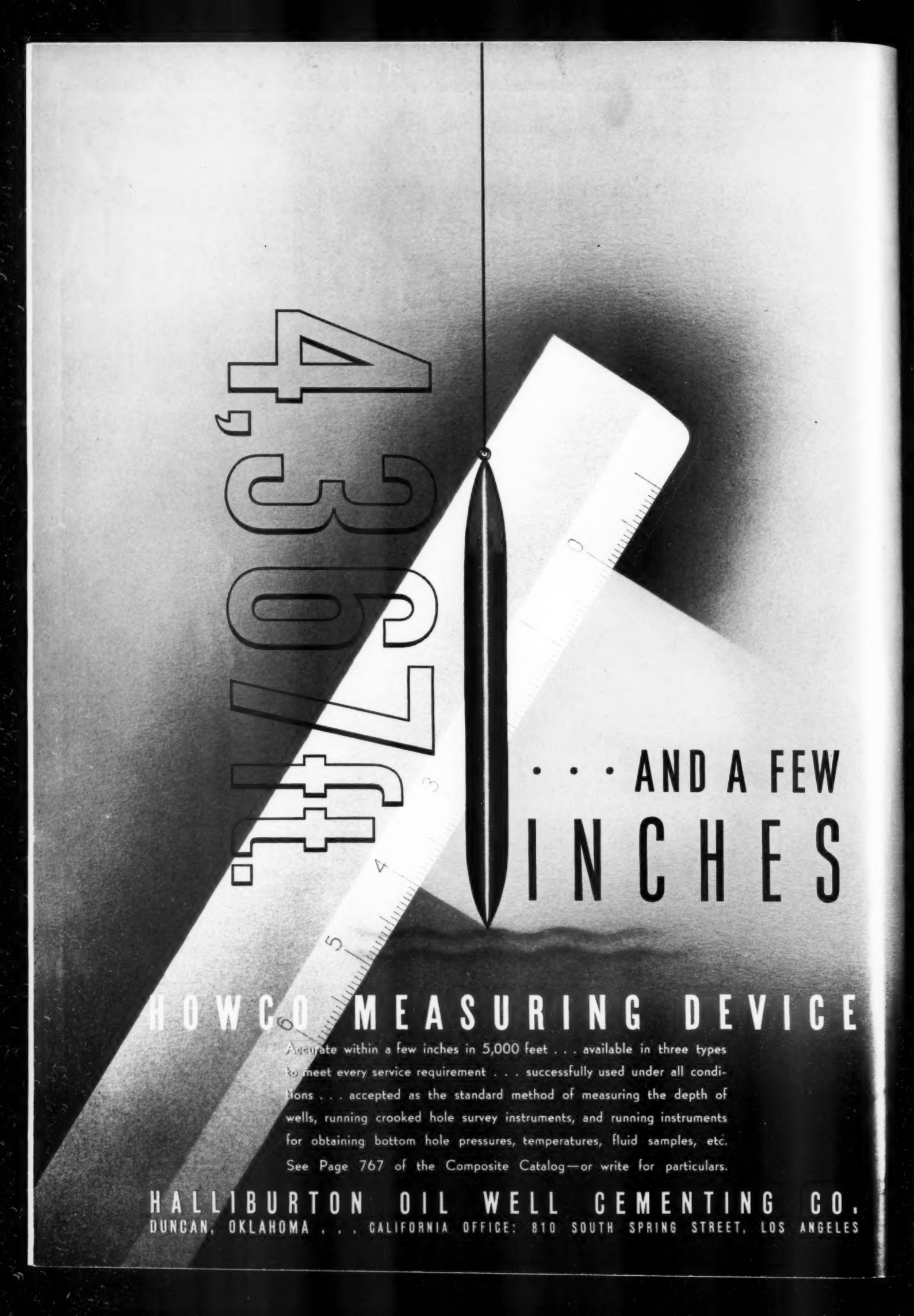
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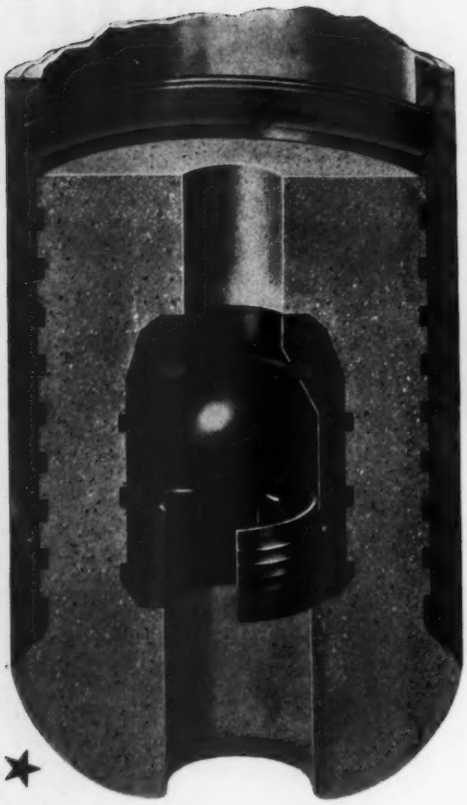

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★ *Showing internal construction of a Baker Cement Float Shoe. Note the strong, seamless steel casing shoe and how the Bakelite Valve assembly is set on end in Baker-Formula Concrete to present a small cross-section to the bit when drilling out.*

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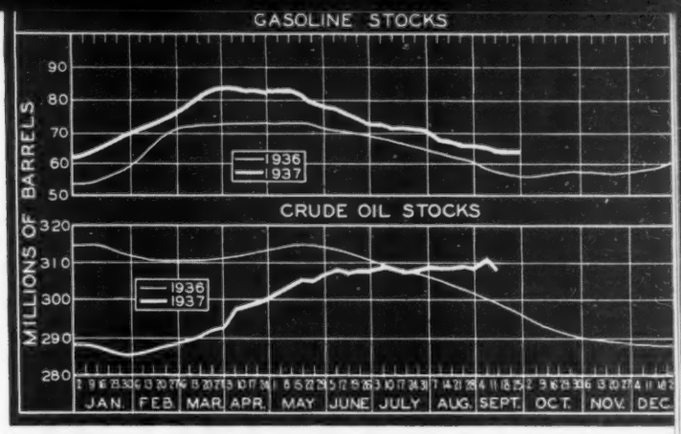


Slight Cut Brings Little Relief

THE crude oil situation was very little improved by producers in the past week. A decrease of 8,905 barrels per day in the production in the United States represented almost a static situation. It had been expected that the last half of the month would see a decided drop in output, but Oklahoma's decline in the past week was more than offset by Texas' increase, and other declines were likewise nullified by greater increases elsewhere.

CRUDE PRODUCTION *3,667,101 barrels daily average—down 8,905 barrels.*

CRUDE STOCKS *711,780,000 barrels as of September 11—down 1,363,000 barrels.*

GASOLINE STOCKS *65,620,000 barrels as of September 25—down 437,000 barrels.*

REFINERY RUNS *3,455,000 barrels, daily average past week—up 55,000 barrels.*

A brief summing up of the refined markets shows prices of bright stocks reduced in Pennsylvania and the Mid-Continent. The gasoline market remains quiet, with the spot market dull and contract movement good. The natural gasoline market is definitely tight, with many plants nearing a sold-out condition. Natural gasoline demand in northern markets is increasing, following cooler weather and its accompanying demand for more volatile motor fuels. The furnace-oil market is in good condition, with the demand increasing steadily as colder weather sets in in northern United States. Mid-Continent refiners generally are nearly sold out and some of them are buying from others to meet contracts.

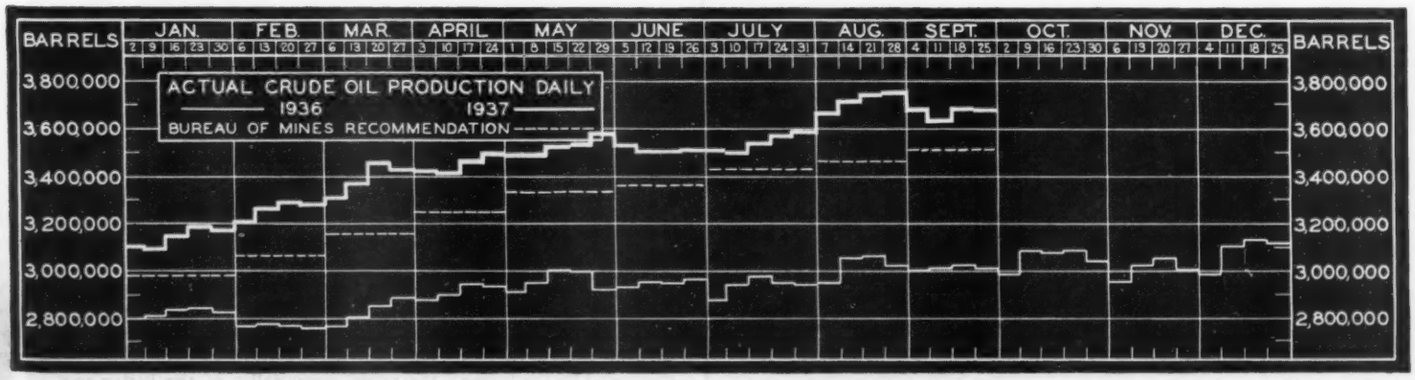
Exploratory drilling opened four oil pools and a gas area in Oklahoma in the past week; a new pool in Lyon County and a Bartlesville sand pool in Sumner County, Kansas. The old Vacuum pool in Lea County, New Mexico, was extended a half mile by a 582-barrel well. Recently opened pools along the Conroe trend in Louisiana and Texas were definitely proven by good production from completion tests of the discovery wells. Another deep dry hole was reported in eastern Colorado, and a test to the St. Peter sand in Perry County, Illinois, drilled into sulfur- and salt water and was abandoned.

New Mexico's Oil Conservation Commission announced a reduction of 10,500 barrels a day in allowable production in that state during the first half of October, bringing it down to 104,000 barrels per day. The Kansas Corporation Commission reduced the Kansas allowable in October to 193,800 barrels a day or 6,100 barrels per day under the Bureau of Mines recommended figures, and 2,450 barrels under the state's September allowable. Chief Conservation Officer William J. Armstrong had recommended that Oklahoma's allowable in October be placed at 600,000 barrels per day, which is no change from the September allowable. It is, however, 29,000 barrels a day below the Bureau of Mines recommended figures for October. One of the large oil buyers recommended a cut to 575,000 barrels a day at the Corporation Commission's hearing. Armstrong's figures were adopted.

Daily Average Production for Week

	Sept. 25, 1937	Bur. Mines Sept. est.	Sept. state allowable	Sept. 18. 1937
Oklahoma City	147,150	.....	.....	147,250
Fitts	79,725	.....	.....	86,175
Remainder of State	373,575	.....	.....	375,750
Total Oklahoma	600,450	633,600	600,000	609,175
East Texas	482,000	.....	.....	479,250
West Texas	224,497	.....	.....	223,698
North Central Texas	106,850	.....	.....	107,100
Texas Panhandle	82,897	.....	.....	82,297
East Central Texas	115,448	.....	.....	116,100
Gulf Coast Texas	365,000	.....	.....	361,950
Southwest Texas	123,850	.....	.....	122,500
Total Texas	1,500,542	1,413,600	1,454,070	1,492,895
North Louisiana	88,845	.....	.....	88,070
Gulf Coast—Louisiana	175,147	.....	.....	173,200
Total Louisiana	263,992	247,900	265,495	261,270
California	687,250	638,200	638,200	694,750
Kansas	193,025	200,900	196,250	195,475
Arkansas	38,685	29,900	.....	35,845
Eastern fields	137,700	124,300	.....	139,500
Michigan	53,807	40,400	.....	52,515
New Mexico	114,540	101,400	114,500	114,490
Rocky Mountain area	77,110	79,100	.....	80,090
Total United States	3,667,101	3,509,300	.....	3,676,006

Decrease of 8,905 bbls. daily.



Development in Illinois Ba
to Lead to New Important

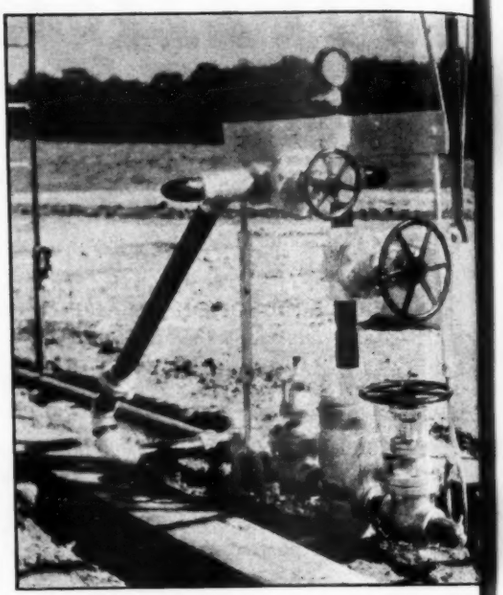
EFFINGHAM, Ill., Sept. 27.—Thus far the active exploration and development work in the Illinois Basin has yielded five new producing areas, and two discoveries which at this time indicate themselves to be field openers. Daily average production from newly developed fields now averages about 18,000 bbls., exceeding production from all the older fields of Illinois, which are averaging about 14,150 bbls. per day at this time. Over 100 wells are drilling in the basin, of which 64 might be considered wildcats or distant extensions to present production. Total producing wells in the five newly opened producing areas now number 111. (Formation graph by courtesy Illinois State Geological Survey.)

Acreage Under Lease

That territory usually referred to as the Illinois Basin, comprising about 10,000,000 acres, includes almost the whole of southeastern Illinois, and the extreme corners of southwestern Indiana and northwestern Kentucky. It has been reliably stated that about 6,000,000 acres in this basin area are now under oil and gas lease, the great portion of which has been assembled during the past 12 months. Many drilling obligations, ranging from 90 days to one year, are included in this acreage.

At the present time blocks of from 3,000 to 5,000 acres or more are being offered at around $10 an acre, and all such prices include a drilling obligation to the McClosky limestone producing zone (Lower Mississippian), encountered from 2,950 to 3,000 feet in the central part of the basin. As a general rule, unless these blocks have been assembled by major companies, they have not been geologized. Many blocks have been, and are being, offered for lease (with drilling obligation) without any geological control whatever. The matter of a certain number of acres is the only stipulation offered in such proposals.

There has been and continues to be considerable speculation about how long this drilling and exploratory activity will continue. Discoveries made thus far indicate that the basin fields will have a relatively small closure and not extend over as wide areas as originally expected. Therefore, it is thought that many test wells, and many dry holes, will have to be drilled in order to definitely prove up this vast area. Geophysical work has proven to be very reliable here, but much drilling is and will possibly continue to be done without this guidance by the independent wildcatters.



Christmas tree hook-up on one of the largest producers of Pure Oil Co., Clay City field

Informed men in the area estimate that wildcat activity will continue throughout this 10,000,000-acre basin for from two to five years, over which time there is justification to expect important discoveries to be made, which in turn will call for intensive development in localized areas. Also, wherever evidence of structure is indicated by drilling into the present objectives at about 3,000 feet in the Mississippian series, deeper tests will probably be drilled to lower levels at a later date. Deeper development throughout the basin will probably be done greatly in the light of geological information developed from the present shallow exploration.

The matter of individual company policies and positions in the area will control to a large extent the development rate of blocks controlled by the larger companies. Those who already have a field organization in the area will perhaps be inclined to explore their blocks in a slow and methodical manner. Those who are required to set up special field organizations for the purpose of drilling exploratory tests will probably continue their wildcatting at a more rapid rate, at least until they develop some production as a result of their test drilling.

A survey of present development, production and activity in the presently developed fields since 1937 is as follows:

Patoka Field

Early in the year the shallow Patoka field of northwestern Marion County was opened by the Adams Oil & Gas Co. at a total depth of 1,391 feet in the Benoist sand (Chester series). Practically all wells in this field are being put to pumping upon completion, the discovery well having an initial production of 140 bbls. Present production from the 43 producers is about 1,400 bbls. of 38-gravity oil daily. At present there are about 24 drilling wells in the field. Adams Oil & Gas Co. controls the bulk of the producing properties here.

Clay City Field

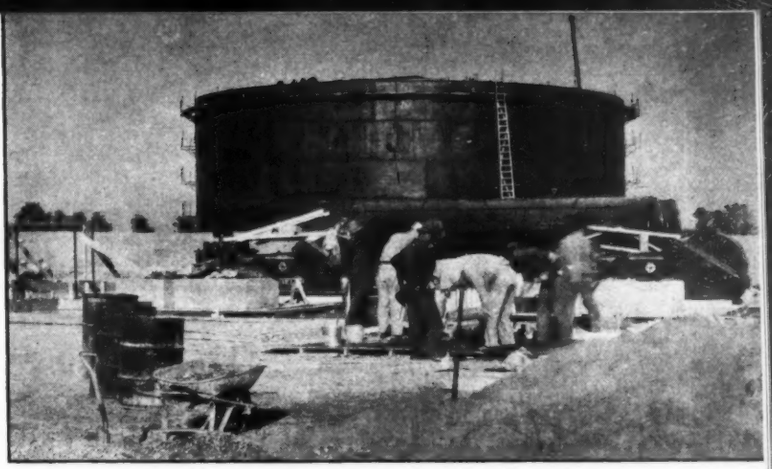
In the latter part of February, Pure Oil Co. opened the Clay City field in Clay County on the Weiler farm (this field has often been referred to as the Weiler field, but the accepted name is now the Clay City field). Initial production of the discovery well from the McClosky sand was 40 bbls. per day. A three-quarters mile extension to the north of this discovery was completed to indicate the actual potentiality of the better part of the

OIL AND GAS PRODUCING STRATA IN ILLINOIS

System or Series	Formation*	Local Name and Area Productive
Pleistocene		Gas from glacial drift
Pennsylvanian	McLeansboro sh., ss., thin ls., and coal	Upper Biggins, "Gas," - Clark County fields
	Carbondale sh., ls., ss., coals	Casey, Claypool, Upper Partlow, Lower Biggins, "Bellair 800'" - Clark County Dykstra, Wilson - Marion County
	Pottsville ss., sh., thin coals	Lower Partlow - Clark County Robinson - Crawford County Bridgeport - Lawrence County Buchanan - Lawrence County Biehl & Jordan - Wabash County Petro - Marion County
Chester (Upper Mississippian) Series	Kinkaid ls., sh. Degonia ss. Clore ls., sh. Palestine ss. Menard ls., sh. Waltersburg ss. Vienna ls., sh. Tar Springs ss. Glen Dean ls., sh. Hardinsburg ss. Golconda ls., sh. Cypress ss. Paint Creek ls., sh. Bethel ss. Renault ls., sh., ss. Aux Vasse ss.	Kirkwood - Lawrence County Carlyle - Clinton County Upper Lindley - Bond County Tracey - Lawrence County Benoist - Marion County
Lower Mississippian Series	Ste. Genevieve ls. St. Louis ls. Salem ls. Warsaw ls. Keokuk ls. Burlington ls. Fern Glen ls.	McClosky sand - Wayne, Richland, Clay, and Lawrence counties Westfield lime - Clark County "Mississippi Lime"
	Kinderhook sh., ls., ss.	Carper sand - Clark County
Mississippian and Devonian	Chattanooga - New Albany sh.	
Devonian	Limestone	"Niagaran" Martinsville pool - Clark County "Hoing sand" Plymouth-Colmar field - McDonough County
Silurian	Dolomite	(Hunton limestone of Oklahoma)
Ordovician	Maquoketa sh. Kimmswick ls. Plattin ls. Joachim ls. St. Peter ss.	"Trenton" Martinsville pool - Clark County Dupo field - St. Clair County (Viola limestone of Oklahoma) (Wilcox sand of Oklahoma)

*ls. = limestone; ss. = sandstone; sh. = shale.

sin Expected Discoveries



Setting engine foundation at Pure Oil Co. main line pump station, Noble, Ill., to handle production from the Noble and Clay City fields

By MITCHELL TUCKER

field, flowing 2,564 bbls. per day on official test with 1,400,000 feet of gas, with a flowing pressure on the casing of 460 pounds and 200 pounds on the tubing.

Development has continued here until at the present time there are 45 oil wells, having a total daily average production of about 12,500 bbls. of

Gasoline engine rig on wildcat location 3 miles south of Effingham, Ill.

41-gravity oil. The greater portion of this production is owned by the Pure Oil Co.

The Pure Oil Co. is now completing its gathering system in both the Clay City and Noble fields, and its 10-inch and 8-inch system to a 400-hp. main line pump station, and tank farm (three 55,000-bbl. tanks) about 1 mile east of Noble, Ill. Production will be moved to Martinsville, Ind., for delivery to Illinois Pipe Line Co.

At the present time there are about 45 drilling wells in the field. Productive limits on the south, north and west of this field have been indicated by dry holes or small pumping wells.

Cisne Field

In the early part of March, Pure Oil Co. opened the Cisne field in north central Wayne County. The discovery well had an initial production of 200 bbls. Three producing wells have been completed here, and the productive limits of the field have been fairly well defined by other dry holes, indicating that this discovery will prove to be relatively unimportant. Daily average production is about 100 bbls.

Noble Field

The Ohio Oil Co. recently opened the fast growing Noble field of Clay County (7 miles west of Olney). The initial production of their discovery well was about 1,600 bbls., but the production rate rapidly declined to its present flow of about 400 bbls., which has been fairly well sustained over the last 30 days. Production is from the McClosky sand encountered at about 3,000 feet. Last week the Mammoth Oil Co. completed a 1½-mile extension to this field, flowing at the reported rate of about 2,000 bbls. daily, throwing the intermediate territory open to immediate development. Productive limits at Noble have been indicated at one end of the field by small pumping wells, but in general, activity here is expected to increase.

At the present time there are nine producing wells at Noble, having a daily average of about 2,100 bbls. of 39-gravity oil. Approximately 20 wells are drilling in the area as further development of apparently proven acreage.

Bartelso Field

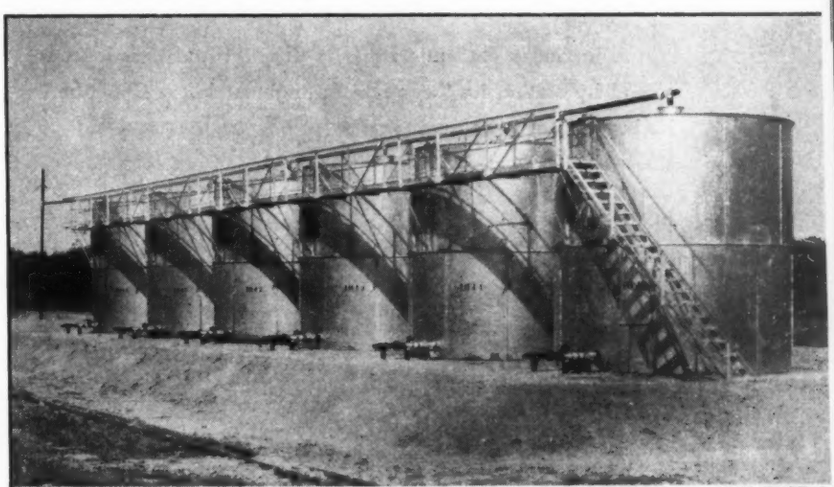
The Bartelso field near Centralia was discovered by the Bartelso Oil & Gas Co. in the latter part of 1936 at a depth of about 950 feet. At present there are 15 producers here, yielding a total daily average of about 900 bbls. Six drilling wells are reported there at present.

Drilling

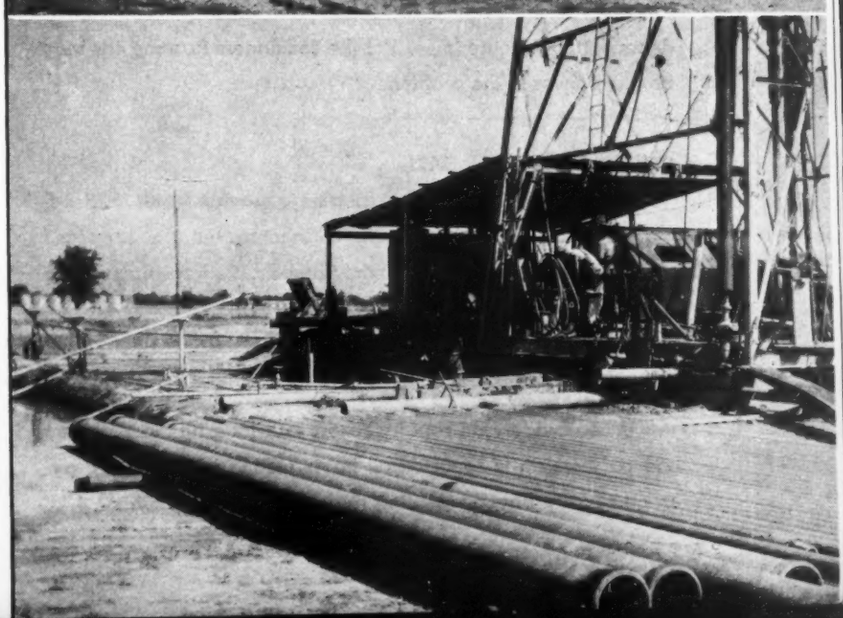
The use of light duty portable drilling rigs is fast becoming standard practice in the basin activity. Fuel and water requirements for the rotaries presented the first problems. Water rights upon nearby streams in proven areas are fairly well leased up, but shallow water wells will supply sufficient water for drilling purposes except in the dry season. The small amount of gas associated with the present oil production is not sufficient to supply steam drilling needs. Present light duty rotaries using steam are fired with crude oil, injected by air or steam. Full diesel or gasoline engine portable drilling rigs are being used more than any other at the present time.

Another major oil company operating in Oklahoma and Texas has entered the field with headquarters in Mattoon. It is the Sun Oil Co., represented by H. L. Griley, geologist of Tulsa, who will be assisted by Stanley Elder. The influx of oil men from fields in every direction from Illinois continues. The newcomers are scattered over the big area, every county seat in the district getting more or less of them.

Up to very recently only one county in Indiana has figured in the new exploration work in the basin, this being Vigo. Last week a well was started in Greene County, Indiana, by the Worthington Oil Co. in NE NE NE section 26-8n-6w. It was last reported drilling at 163 feet. Greene is the second county east of Crawford County, Illinois.



Tank battery of Pure Oil Co., Clay City field



Portable diesel rotary drilling outfit on inside location

SPARKS FROM THE NEWS

HEY, MR. HOPKINS!

The W.P.A. will miss a great opportunity if it neglects a housing program for accommodation of the throngs who will be seeking lodging at Madison, Wis.

DEAD WELLS

It is reported there are many wells unable to make their allowable in East Texas and their underage is being made up by overproduction from other wells on the lease. Stopping this practice will reduce the production and improve the whole Texas situation.

TAXES IN TEXAS

Some Texas legislators have revived the proposal to increase the production tax from 2¾ per cent to 10 per cent and Governor Allred suggests larger taxes on pipe lines. Fortunately some of the members know enough about the oil industry to oppose these ideas.

OPTIMISM

A Japanese student writing to The Oil and Gas Journal closed by stating he "was not an engineer but a Christian." He hopes later to be an engineer.

HOME HEATING

The substantial rise in coal stoker sales this year shows that the market for automatic heating devices is not saturated and should suggest still greater oil burner sales efforts.

SWITCH

Shortage of shallow natural gas in western and northern Pennsylvania counties is becoming a serious problem for independent gas companies. For the consumers furnace oils may be the answer to the problem.

COULD BILL UNCLE SAM

The Grand River dam is expected to provide water for flooding operations in northeastern Oklahoma but the proposed Oologah dam would flood out the flooders. Perhaps they would not mind.

HIGH-BROW STUFF

When bidders on royalty resort to a logarithmic scale, as one partnership is reported as having done in Texas, the average royalty buyer is willing to drop out of the play.

COMEBACK

Among the records in the making is a new peak in kerosene demand. New uses are the explanation.

THANKS, COLONEL!

Colonel Thompson's explanation of the workings of the Interstate Oil Compact before the American Bar Association included a good word for the oil industry.

NEW EASTERN PEAK?

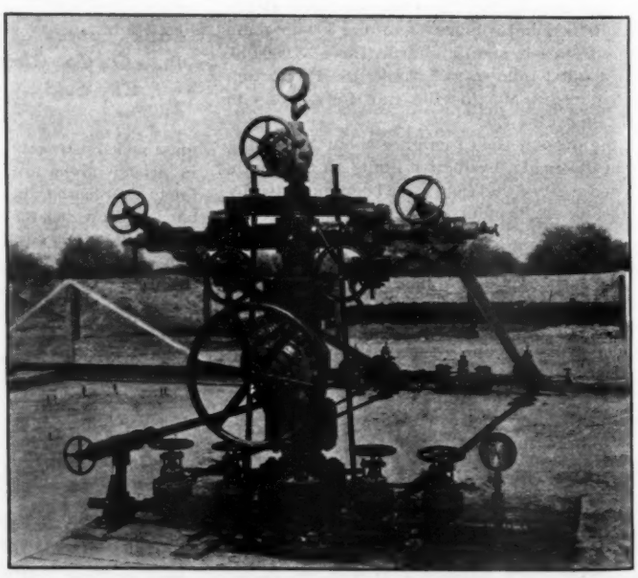
The production peak east of the Mississippi was in 1913 when New York, Pennsylvania, West Virginia, Ohio, Kentucky, Indiana and Illinois combined to produce 61,677,000 bbls. or an average of 168,951 bbls. per day. Michigan has been added and it and the other states are expected to make a new production record in 1937, 24 years later. The Illinois Basin will supply enough new production to accomplish this. The Eastern area is now producing around 190,000 bbls. per day.

OUTSIDE EXPANSION

Modernization of refineries outside the United States continues at several points reflecting the effort to keep pace with an increasing demand for improved products.

ANOTHER EXPLANATION

Resort owners are complaining that automobile tourists do not take time out in their motoring to eat or sleep. This may be another explanation of the high consumption per car this year.



Handling high pressures in California

Louisiana Discovery Opens Possibilities

By L. G. E. BIGNELL

With the opening of a new oil field in Evangeline Parish in southern Louisiana by the Continental Oil Co. No. 1 Tate well this company is to be credited with the discovery of three important fields as a direct result of geophysical work done in those areas. In 1935 the Tepetate field, north of the old Jennings field in Acadia Parish was discovered by this company and during the first part of this year the Abbeville structure in Vermilion Parish was opened with a deep test drilled to 12,216 feet but plugged back to 7,666-75 feet where production was found. On September 18 it was announced that the third strike had been made when No. 1 Tate was completed as a 175-bbl. per day producer from a sand found at a depth of 8,977 to 9,040 feet.

This find is of importance in that it is the thickest sand body found in any deep seated Gulf Coast field and also because the Sparta formation of the Claiborne series of Eocene age has not been productive in southern Louisiana before. This formation did show signs of gas and oil in the old Urania oil field in LaSalle, Winn and Grant parishes, in the northern part of Louisiana. The Urania field is located along the Angelina-Caldwell flexure, a geological feature which divides Louisiana into two provinces with the area to the south having deep seated productive formations while those to the north are from comparatively shallow depths. The top of the Sparta formation is found at a depth of about 900 feet in the Urania field where it is about 430 feet thick.

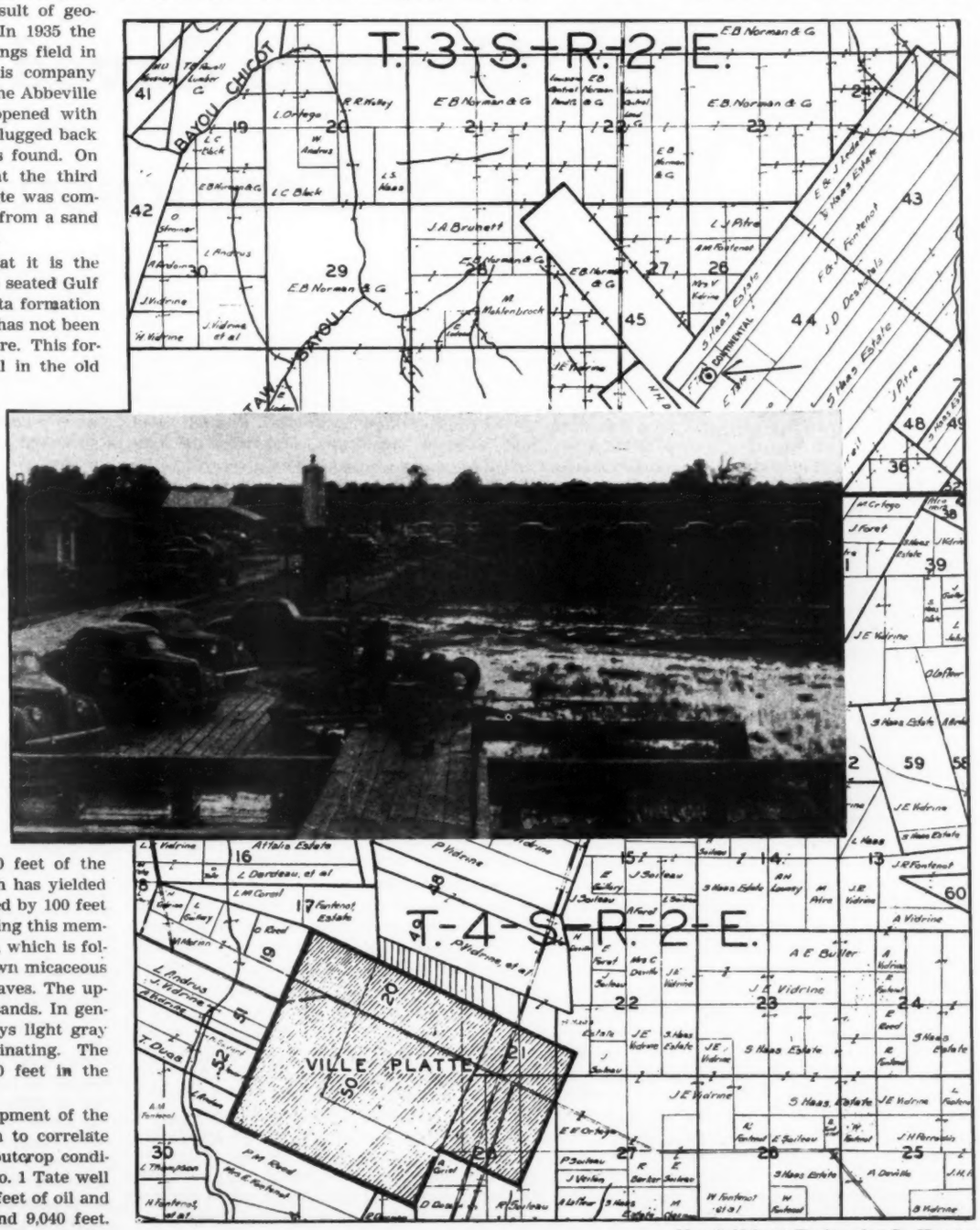
In "Structures of Typical American Oil Fields" published by the American Association of Petroleum Geologists, G. W. Schneider, geologist for the Texas Co., reports on the Urania field and has this to say about the Sparta sand:

"The Sparta sand is dominantly sandy but contains some beds of clays and sandy clays. The basal 30 feet of the Sparta sand is a massive sand, which has yielded showings of oil and gas. It is followed by 100 feet of interbedded clay and sand. Overlying this member is 40 feet of sand, in part lignitic, which is followed by 80 feet of dark gray to brown micaceous and lignitic clay, containing fossil leaves. The upper 180 feet is made up of massive sands. In general the sands are gray and the clays light gray to brown with the brown predominating. The Sparta sand has a thickness of 430 feet in the Urania field."

It is still too early in the development of the new discovery in Evangeline Parish to correlate the Sparta section with the known outcrop conditions but it is reported that in the No. 1 Tate well the electric coring device showed 63 feet of oil and gas saturated sand between 8,977 and 9,040 feet. The total depth of the hole is 9,100 feet and 7-inch casing was set on bottom and cemented and the casing later perforated between 9,015 and 9,035 feet. The 34 shots did not cause this well to produce so another run with the gun perforator was necessary and this time the upper shot was placed at about 9,007 feet and it is believed this penetrated the gas zone of this formation for after the other 11 shots were fired into the casing between 9,015 and 9,035 feet the well was unloaded by washing out the mud with oil introduced through a string of 2½-inch tubing. When a sufficient quantity of mud had been removed from the hole the well began to flow and made 175 bbls. per day through a three-sixteenths inch choke at the tubing head.

The tubing pressure is reported as 2,500 pounds and the pressure on the casing at 2,700 pounds. This indicates a high formation pressure which will be checked later with pressure bomb. The tubing is hung about 200 feet off bottom and the lower end fitted with bull plug and the lower joint of the tubing perforated to admit the gas and oil.

This hole was started June 22, 1937, and drilled with steam powered rotary. Much of the formation penetrated was cored and when the critical section was reached at about 9,000 feet cores were taken of the sand. These cores showed saturation and this was confirmed when the electric coring device was run. The sand is clean and there is at



Map Gulf Coast Engineering Co. Houston

Ownership map of Ville Platte area. Insert, while No. 1 Tate well was being completed the roads were blocked with automobiles

least 75 feet of it which apparently correlates with the lower 30 feet of sand found in the base of the Sparta section at Urania field. The thickening of this sand body is of special interest and indicates that this formation may become a new source of oil in the Gulf Coast area.

The oil has a gravity of about 50 degrees A.P.I. and is dark green in color. It contains no sulfur. The well makes considerable gas but the gas-oil ratio has not as yet been determined.

The well is located about 5 miles due north of Ville Platte, a village in the east central part of Evangeline Parish on a branch of the T. & P. Railroad. The country is flat with patches of uncut timber along the bayou. Small farms upon which are raised rice and cotton dot the landscape but with the exception of an old test located within a mile of No. 1 Tate and drilled several years ago to a depth of about 4,000 feet there has been no oil activity in this vicinity until the Continental Oil Co.'s discovery.

In discussing the oil possibilities of Louisiana in a paper presented before the A.P.I. meeting held in Shreveport, La., in April, 1936, Dr. Henry V. Howe, geologist with the Louisiana State University, Baton Rouge, La., made these observations regarding Eocene horizons:

"The Angelina-Caldwell flexure separates northern Louisiana with its numerous Cretaceous fields, from central and southern Louisiana in which areas the oil production is of Tertiary age. North of this 'flexure' Cretaceous formations lie at relatively shallow depths and are gently folded into the broad Sabine uplift on the west and Monroe uplift on the east. On each uplift are smaller, sharper folds which have served for the localization of oil and gas deposits. The depressed area between these major uplifts contains the salt domes of North Louisiana as well as a number of other structures on which salt has not been encountered.

"Southward from the Angelina-Caldwell flexure in that portion of Louisiana west of Mississippi River, the regional dip of the Tertiary formations is to the southeast at a rate of from 100 feet per mile to probably more than 200 feet per mile, and the Cretaceous formations are depressed under the thick accumulation of Eocene and younger sediments. The position of the Angelina-Caldwell flexure appears to coincide remarkably with the position of the Sabine (Wilcox) shoreline. While Eocene formations mantle the surface of most of Louisiana north of the Angelina-Caldwell flexure and attain considerable thickness in the southern part of the interior salt dome basin, they are quite largely continental and have not produced oil in appreciably quantities. The Urania field is on a terrace on the Angelina-Caldwell flexure. It is along this flexure and in the region to the south of it that important Eocene production may be expected.

"East of the Mississippi River, that portion of Louisiana known as the 'Florida Parishes' is dominated by a structural feature similar to the Angelina-Caldwell flexure. This 'flexure' the writer proposes to term the Mobile-Tunica flexure, as it begins along a line which extends from the mouth of Mobile Bay to the Tunica Hills of Wilkinson County, Mississippi, and the northern part of the Feliciana Parish of Louisiana. Toward its western end, this flexure broadens somewhat, but across southern Alabama, southeastern Mississippi, and the Louisiana parishes the line is very sharp. North of it the Tertiary formations have a gentle coastward dip around 20 to 35 feet per mile and, with the exception of the Sabine (Wilcox), are comparatively thin; south of it the dip becomes 100 to 200 feet per mile, a feature which continues to the tip of Mississippi delta, and the formations thicken prodigiously.

"The significance of this line is apparent on any good contoured topographic map of the Gulf Coastal region. On it, the 500-foot contours of the Tunica Hills and nearly the entire region of Wilkinson and Adams counties, Mississippi, are seen to stand in bold relief to the lowlands of Louisiana, and even to the central portion of Mississippi. The relief is so great as to suggest strongly that there has been recent upward movement of the terrane lying north of the flexure; the movement being greatest near the western terminus. Such movement need not be surprising, for it would afford partial compensation for the tremendous downwarp of the lower delta region necessitated by Mississippi sedimentation.

"While the Mobile-Tunica flexure is not productive of oil at present, its similarity to the Angelina-Caldwell flexure is so great that one may expect structures along it similar to the one which has formed the Urania field."

The importance of these observations by Doctor Howe lies in the apparent downwarping of the deep seated sediments due to the overloading of the ancient coast line through the deposition of great quantities sediments carried down by the old Mississippi River. When this burden became too great part of the earth's crust sunk and in so doing a zone of flexure was produced which is outlined by Doctor Howe in the quotation above. By examining any good map it will be noted that the Mobile-Tunica Hills flexure lies in an east-west line a little north of the recent discovery of the Continental Oil Co. If the structural feature broadens at its Louisiana end it is possible that this new field may be high up on the south flank of a major structure and the gas and oil has accumulated in a local sand body on this major structure.

Compact Saved Industry, Col. Thompson Tells Bar

KANSAS CITY, Mo., Sept. 28.—Speaking today before the annual meeting of the American Bar Association Col. Ernest O. Thompson, chairman of the Interstate Oil Compact Commission, said:

"With the advent of the NRA, there was a very strenuous effort made towards the passage of a strict federal control oil bill in the congress of the United States. Those of us who felt keenly and feel keenly about the sovereignty of the states, and those of us who wished to preserve the line drawn by the federal constitution between general and particular governments, did everything, every prudent thing, we could to prevent this seeming encroachment by the federal government into a field which we thought and still feel to be one of wholly state concern. Those of us who fought federal control of oil reasoned that if the production of oil, the mere production of oil, was not commerce, then it certainly could not be interstate commerce, and if the mere production of oil be not commerce or interstate commerce, then it could not be a matter of congressional concern.

"We reasoned that the constitution simply did not give to the federal congress the right to say how much oil a particular well in the state of Kansas or Texas could produce. We reasoned that the federal government had no authority to say to a man in Texas when or where or how many oil wells he could drill upon his farm.

"We felt that it was of immense consequence to the states that they retain as complete authority as possible over this question of protecting this great natural resource that was found within the confines of the sovereign states. We felt that if we should submit to federal control of production of oil and gas, that we would very shortly have to go to Washington to get a permit to drill a well, and further than that, we felt that in the management of her affairs each state was sovereign and supreme, subject only to the control of the people within her dominion; that if we accepted the regulation of the federal government as to the production of oil and gas within the sovereign states, our state would be surrendering the supervision and inspection of one of her most important industries to the federal government; that for the temporary spoils of seeming security of the moment we would be opening the way for the invasion and final destruction of our state's independent autonomy; that for a mess of pottage seasoned with the sacrifice of principle, we would be surrendering our birth-rights as states.

"Those of us who had to do with the production of oil during these troublesome times in Texas steadfastly held to the purpose that we wanted no federal invasion of this right to control mere production of oil within the confines of our sovereign state. We stood by that fight and won a victory.

"The Oil States Compact, or Treaty, is a by-product of that fight. The oil states have made noteworthy progress during the short existence of the compact. It has accomplished much more than was ever expected of it in so short a time. It has been said by many authorities that the oil industry has made greater progress under the oil states compact than under any effort at regulation in the past. None can deny that the oil industry was in a precarious condition when it started. None can deny that the oil industry is today in excellent condition. Demand for oil has been extremely high. Production is under reasonable control. All industry seems to be headed for progress and prosperity, and certainly the oil industry is leading the advance guard in the march of progress.

"It is a choice between arbitration and conciliation, and the harsh decrees from a centralized dictatorship. I, for one, much prefer that we shall progress—perhaps not so perfectly, but much more happily."

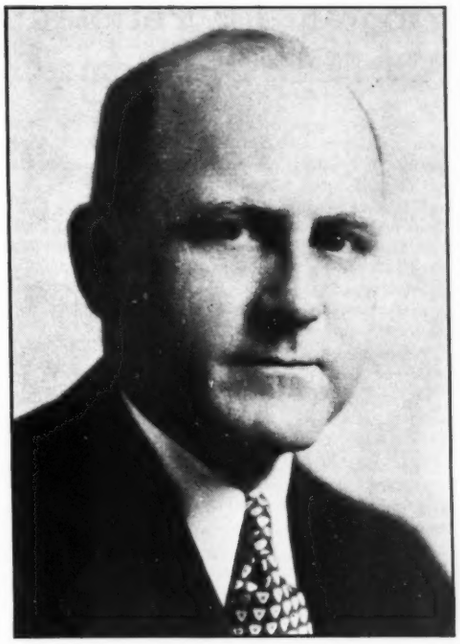
Texas Legislator Predicts Federal Tax on Crude

AUSTIN, Tex.—Federal invasion of the oil production tax field is predicted by Senator Joe Hill of Henderson. He says there is a well-defined sentiment among the forty nonproducing states to levy an oil tax for the retirement of the $37,000,000,000 federal deficit. "A federal oil tax is a real peril," he said. "There is grave danger of it, unless states pre-empt that field of taxation." A tax of 10 cents a barrel would yield the federal government $100,000,000 a year, he said.

Representative C. L. Harris who favors a moderate increase in the oil production tax from 2¾ per cent, predicted the omnibus bill boosting rates on natural resources would be the principal proposal of the house to raise revenue.

Industry's Attention Fixed on Madison

By HENRY D. RALPH



JUDGE PATRICK T. STONE

WASHINGTON, Sept. 27.—To Madison, Wis., this week go half a dozen of the government's antitrust attorneys to meet perhaps half a hundred attorneys for the oil industry in the federal district court of Judge Patrick Stone to try the most important antitrust case in years.

The trial, which opens October 4, is on an indictment of 21 major oil companies operating between Indiana and the Rocky Mountains, against three publishing companies quoting gasoline prices, and against 58 officials of the 24 corporations. The charge is that the companies and the individuals conspired to fix and raise the price of gasoline in the Mid-Continent which constituted a combination in restraint of trade.

The Madison case is important for many reasons: it involves a very large section of a leading industry. Its outcome may determine action on other antitrust charges against the oil industry. It is one of the few large antitrust cases brought on criminal rather than civil charges. The charges involve a plan on the part of leaders of the industry to stabilize prices and business conditions, an objective toward which both the government and many industries have been working for many years, thereby demonstrating the conflict between the antitrust laws and the concept of stabilized industry. The case may determine whether or not the administration will proceed with strict enforcement of the antitrust laws against many industries or will abandon them as obsolete and attempt some new form of regulation of competition.

May Last for Years

The trial is expected to last for weeks, possibly months, and undoubtedly an appeal will be taken to the Supreme Court so a final decision may not be had for two or three years.

The evidence which will be presented has been carefully guarded by the attorneys for both the government and the oil companies. Investigators of the Department of Justice have been gathering evidence for more than a year, while the defense counsel has also had a large staff preparing the case for the companies. The chief counsel for the defense is Col. William J. Donovan, formerly assistant attorney general of the United States, and he will be assisted by some of the most able attorneys in the country. The case for the government is in charge of John J. Boyle, United States district attorney for the Madison district, William P. Crawford, a Wisconsin lawyer, and W. B. Watson Snyder.

The Madison trial climaxes a series of investigations of the oil industry which have been under way since the Supreme Court invalidated the NRA and thereby terminated the petroleum code of fair trade practices under which the government cooperated with the industry in attempting to stabilize prices, markets, and competitive conditions. The legislature of Michigan made the first investigation, and the charges were formally laid before the Department of Justice by the National Oil Marketers Association on June 18, 1935, three weeks after the Supreme Court's decision terminating the NRA. The Department of Justice began active field investigations in January, 1936, and in April announced criminal indictments would be sought from a federal grand jury. The district court for the western district of Wisconsin was selected, and the grand jury was convened on May 4, 1936. The grand jury sat most of the summer, and brought in its first indictment on July 28 and its second indictment on November 6, 1936. These indictments were attacked for technical irregularities, and a second grand jury returned two almost identical indictments on December 22, 1936. Meanwhile Judge Stone ruled the first indictments were valid and the trial should be brought on them.

Only the first indictment, styled the United States vs. Standard Oil Co. (Indiana) et al. goes on trial October 4. The second indictment, known as United States vs. Socony Vacuum Oil Co., Inc., et al, probably will not be brought to trial until the first case is completed. It names as defendants virtually the same set of companies as the first indictment and the charges are illegal conspiracy to fix jobbers' margins and to restrict the amount of business available to independent jobbers.

In addition to the two Madison indictments, the Department of Justice is now conducting two other extensive investigations of charges of antitrust violations by the oil industry. One covers the eastern section and involves many of the same defendants and practically the same charges covered by the Madison indictments. This investigation is said to be in the preliminary stages, and officials will not predict when any action may be taken.

The other investigation is proceeding on the Pacific Coast, chiefly California, and is in the advanced stages of investigation. Some court action may be taken within three months or sooner. The Pacific Coast case has no relation to the charges in the Madison indictments or in the East Coast investigation, but grows out of a consent decree against Standard Oil Co. of California and others obtained by the Department of Justice in 1931. Investigation is being made into charges that some of the terms of this decree are being violated and also that the antitrust laws are being otherwise violated by price and marketing practices of the major oil companies on the Pacific Coast. In April, 1935, while the NRA code was still in effect, the attorney general requested the Federal Trade Commission to investigate compliance with the antitrust act generally and with this consent decree in particular by oil companies of the West Coast. The commission submited its report two years later, and since then the Department of Justice has been checking it and securing additional information. It is said the West Coast companies have offered to cooperate fully with the government in obtaining information, which may indicate the Department of Justice's action will be a civil suit seeking an injunction against continuation of the marketing practices alleged to violate the law rather than a criminal indictment which might mean fines and prison sentences for convicted officials of the companies concerned. In the past, the usual practice of the Department of Justice has been to bring injunction suits or obtain consent decrees where the defendants admitted the violation and did not attempt to conceal the facts, and to resort to criminal indictments only when it was impossible to obtain the facts without subpoenaing witnesses.

Terms of Indictment

The terms of the first Madison indictment, the one which goes to trial next Monday, declare the defendant major and semimajor oil companies together manufacture and sell more than 85 per cent of all gasoline distributed yearly in the mid-western area. Each owns or controls its own retail filling stations, also sells quantities of bulk gasoline to independent retailers, and each, except the Standard of Indiana, also sells gasoline in large quantities in tankcar lots to jobbers. It is declared that at the present time in excess of 80 per cent of all gasoline purchased by the jobbers is purchased from the defendant major oil companies. In the contracts for the sale of gasoline to jobbers the price to be paid is related to the spot market price as published in various oil market journals, but the indictment declares the defendant companies do not sell any substantial part of their gasoline in spot transactions, and that virtually all gasoline sold on spot is sold by independent refiners, and spot transactions constitute less than 5 per cent of all gasoline marketed in the mid-western area.

Knowing this to be so, the defendants, says the indictment, beginning in the month of February, 1935, conspired together for the purpose of artificially raising and fixing the tankcar prices of gasoline in spot markets, and thereby intentionally increased and fixed the tankcar prices of gasoline sold in interstate commerce throughout the mid-western area and in turn intentionally raised the general level of retail prices of gasoline throughout that area. The indictment declares these spot gasoline prices were controlled through two joint buying programs, one conducted in the East Texas field with the cooperation of the East Texas Refiners Marketing Association, and the other conducted in the Mid-Continent field with the cooperation of the Western Petroleum Refiners

(Continued on Page 30)

Program for Petroleum Division of A. I. M. E. Oklahoma City, Oct. 7-9

The final program for the fall meeting of the Petroleum Division of the A.I.M.E. in Oklahoma City, October 7, 8, and 9, has been completed. The technical sessions will be held in the Biltmore and the meeting will start with a breakfast for authors, presiding officers and division officials at 7:30 a.m., October 7. Registration will start at 9:00 a.m. and the first technical session to be presided over by M. Albertson, Shell Petroleum Co., Houston, and M. L. Haider, Carter Oil Co., Tulsa, and R. S. Knappen, Gulf Oil Co., Tulsa, will assist. The papers to be presented will be:

"Methods of Testing Oil Sands," W. J. Murray, University of Texas.

"Gas Caps and Methods of Determining Gas-Oil Contacts," P. P. Gregory, chief petroleum engineer, Yates Pool Advisory Committee, Iraan.

"Pressure Distribution in Producing Oil and Gas Reservoirs," A. J. Miles, Missouri School of Mines and Metallurgy, and Eugene A. Stephenson, University of Kansas.

Discussion on economic trend in production.

"Spacing of Oil Wells," L. L. Foley, consulting engineer, Tulsa.

Afternoon session, October 7, 2:00 p.m., Civic room, Biltmore Hotel.

R. L. Huntington, chairman; W. H. Carson, associate chairman, both with University of Oklahoma.

"Origin of Petroleum," E. Berl, Carnegie Institute of Technology, Pittsburgh, Pa.

"Connate Water in Oil Sands," R. J. Schilthuis, Humble Oil & Refining Co., Houston.

"The Salinity of Water Buried Sediments," Paul Weaver, Gulf Oil Corp., Houston.

"The Effect of Pressure Upon the Viscosity of Air, Methane and Two Natural Gases," B. H. Sage and W. N. Lacey, California Institute of Technology, Los Angeles.

"Flow Equilibria of Two Immiscible Liquids in Unconsolidated Sands," E. N. Dunlap, Standard Oil Co. of California, Los Angeles.

Stray earth currents.

Friday, October 8. Morning session 9:00 a.m. Civic room.

L. L. Foley, chairman; C. E. Reistle, Jr., associate chairman.

"Steady and Unsteady Flow of Oil-Gas Mixtures through Unconsolidated Sand," L. S. Reid and R. L. Huntington, University of Oklahoma.

"Abnormal Pressures in Reservoirs," Paul Weaver, Gulf Oil Corp., Houston.

"Probable Cause of Blowouts," H. C. Spoor, Jr., United Production Corp., Houston.

"Gel Formation in Mud," Charles E. Reed, Massachusetts Institute of Technology.

"Shear Strength of Muds," Benjamin C. Craft and Benjamin I. Routh, Louisiana State University.

"Intensive Mud Weighting," H. E. Gross, University of Oklahoma.

Afternoon session, 1:30 p.m.

T. V. Moore, chairman; J. T. Hayward, associate chairman.

"Stage Separation of Crude Oil-Gas Mixtures," G. O. Kimmel and R. L. Huntington, University of Oklahoma.

"Behavior of Contents of High-Pressure Reservoirs," Eugene A. Stephenson, University of Kansas.

"Use of Equilibrium Constants in Production Engineering," D. L. Katz, University of Michigan.

"Calculation of Equilibrium in Hydrocarbon Mixtures," S. E. Buckley, Humble Oil & Refining Co., Houston.

"Desalting of Crude Oil," Gustav Egloff and E. F. Nelson, Universal Oil Products Co.

"Oil Treating," S. F. Mauney, Jr., Carter Oil Co., Tulsa.

Saturday, October 9. Field trip through Oklahoma City and Moore fields and to the School of Petroleum Engineering, University of Oklahoma.

Antiknock Ratings Studied by Research Committee

During the past months the Cooperative Fuel Research Committee has accumulated information for the purpose of studying the correlation between laboratory antiknock ratings and road antiknock ratings under summer and winter conditions. The road test work was carried out by 24 individual cooperating organizations operating independently. Experimental fuels were used which included the types now used commercially. Nineteen of these fuels were of conventional winter volatility and 17 similar fuels had summer volatility characteristics. Sixty-three cars of 23 different models were used in the winter tests, 56 of these being used in the summer tests, giving a total of 1,182 road knock ratings.

The laboratory work consisted of an investigation of the effects of engine operating variables on the knock ratings of 10 of the winter test fuels. The variables studied were spark advance, engine speed, and intake mixture temperatures. Using these variables 30 different combinations were investigated which resulted in ratings which covered a range extending beyond that of the Research and Motor Methods.

These data are at present being studied by the committee with the object of obtaining further information with respect to the correlation between laboratory knock ratings and road knock ratings.

Superior and Pure Heaviest Bidders on Submerged Leases

AUSTIN, Tex.—Superior Oil Co. and Pure Oil Co. were the heaviest bidders for submerged oil leases on 80,000 acres in Laguna Madre off the coast of Kleberg and Kennedy counties. They paid $40,000 each for two 320-acre tracts and one-eighth royalty plus $160,000 out of one-eighth of the remaining seven-eighths from each tract. The state will receive a total of $272,820 cash and $2,740,000 in oil payments.

Kansas Oil Men's Association For Enforcing Gasoline Tax

The Kansas Oil Men's Association, E. M. Taylor of Kinsley presiding, pledged support of gasoline tax enforcement. The annual meeting will be held February 13-14 at Wichita.

At launching of the "Red Crown" for Standard Oil Co. (Indiana) at Manitowoc, Wis.: Mrs. Bruce Johnstone, R. R. Tilton, superintendent of marine department; Mrs. Tilton, Mrs. Amos Ball, Mrs. Conger Reynolds, E. J. Bullock, vice president in charge of purchasing; Mrs. C. J. Barkdull, sponsor; F. T. Graham, secretary; Mrs. E. H. Scott, sister of Edward G. Seubert, president; H. F. Glair, general manager of manufacturing; Mr. Seubert, Mrs. M. G. Paulus, J. E. Thiell, Manitowoc Shipbuilding Co.; Dr. Paulus, vice president in charge of manufacturing; Mr. Johnstone, director; Allan Jackson, vice president in charge of sales; Mrs. Jackson, Mr. Barkdull, executive vice president and treasurer; Mrs. Glair, Mr. Ball, general manager of sales; Mrs. Graham and Ralph C. Kerr, Chicago & Northwestern Railroad.

Proration in Turner Valley Follows Excessive Storage

CHATHAM, Ontario. — With an estimated 200,000 bbls. of crude in storage at Calgary and in the Turner Valley field, a 65 per cent proration has been enforced by Imperial Oil Ltd., and British American Oil Co. since September 12. This applies to producers under contract and is announced as a temporary measure. A number of independents have refused proration and are undertaking to market their production through their own distributing systems.

R. V. LeSueur, vice president of Imperial Oil, Ltd., says: "Oil production is now running between 11,000 and 12,000 bbls. daily. The company is only able to use about 4,500 bbls. daily in its Alberta refinery. In recent weeks the company has been able to ship about 2,500 bbls. daily to Regina, while the British American company has been shipping about 1,000 bbls. daily to Moose Jaw. This makes a total of some 8,000 bbls. daily, the limit of the market at this time and the level to which the proration scheme would cut production.

"At the time Imperial Oil, Ltd., was shipping to Regina, the price was cut 25 cents a barrel to $1.52 to meet the competitive price from the Cut Bank field. To maintain this price, proration must be accepted."

Independent operators are organizing a Petroleum Producers Association. The committee includes Walter S. Campbell, director of the Anglo-Canadian Development & Holding Co.; W. C. Fisher, president and managing director of Model Oils, Ltd.; and Robert Wilkinson. The association has made representations to T. A. Crerar, minister of the interior, in regard to securing the Canadian market for native crude; exclusion of Montana crude from the western provinces; and government assistance by way of pipe line facilities or a subvention on freight to enable western crude to compete in eastern Canada. Imperial Oil has announced imports of Montana crude for its Regina refinery will be discontinued at the end of September.

Trans-Pecos Reports Contract With an Italian Company

The Trans-Pecos Pipe Line Co., Inc., referring to movement of oil to Italy says the customer for this oil is Aquila Societa Anomia Tecnico Industriale, which has contracted over a period of from three to six years for crude oil Trans-Pecos is running from the Jackson, Artesia, Maljamar area, Eddy County, New Mexico. The company says it is running at this time in excess of 4,000 bbls. per day.

Everything Is Reported Ready for Oil-World Exposition

HOUSTON, Tex., Sept. 27.—Everything is in readiness for the opening of the Oil-World Exposition in the new $1,337,000 Coliseum October 11. President John R. Suman and General Manager Ed G. Lenzner have approved the official program which begins with the official opening at 1:30 p.m. Monday. In the evening the U. S. Army band will provide a concert and the U. S. Army Aviation Division will give a searchlight display and sound detector maneuvers which will be repeated nightly.

Subjects of vital interest to refinery operators will be discussed at the meeting of the chemists division of the refinery committee during the entire day and evening of Tuesday, at which the following papers will be delivered:

Morning session:

"Chemical and Physical Methods for the Extraction of Salts from Refinery Charging Stocks."

"Controversial Methods of Asphalt Testing."

Afternoon session:

"The Treatment of Boiler Feed Waters."

"Comparison of Octane Numbers of Various Types of Refinery Products as Obtained by Different Methods."

"Accelerated Method of Determining Stability of Cracked Fuels."

Evening session:

"Testing Methods of Evaluation of Used Motor Oils."

"Oxidation of Lubricating Oils."

This program will be given under the supervision of the active committee of the chemists division of the refinery program which consists of: K. H. Clough, W. H. Curtin & Co., chairman; Dr. Fred W. Karl, Gulf Oil Corp.; R. C. Rich, Shell Petroleum Corp.; A. R. Rickards, Sinclair Refining Co.; E. W. Gardiner, Texas Co., and W. F. Fulton, United Gas Co.

Between 2 and 4 p.m. Tuesday the directional drilling committee of the American Society of Mechanical Engineers will hold a forum. The society's committee consists of W. F. Herbert, Texas Co., chairman; W. P. Preston, Texas Gulf Sulphur Co.; W. W. Scott, Humble Oil & Refining Co.; F. M. Leverett, Texas Co.,; D. D. Alton, Southern Pacific Lines; A. B. Steen, Jr., Humble Pipe Line Co., and Nathan Janco, Reed Roller Bit Co.

The Humble Oil & Refining Co. Glee Club will offer a concert at 7:30 p.m.

Wednesday's program will open with the conference on refinery measurement and control from 9 a.m. to noon and continued from 1:30 to 5 p.m. The transportation conference will also be held during the day. The Oil Men's Golf Tournament at the Brae Burn Country Club will provide entertainment.

Registration for members of the Independent Petroleum Association of America, which will hold its annual meeting during the exposition, will begin at the Rice Hotel Wednesday morning. At 7:30 p.m. the oil equipment export meeting and dinner will be held at the Houston Club.

The conference on refinery measurement and control will resume Thursday. The Independent Petroleum Association meeting will convene at 9 a.m. at the Rice Hotel where the Interstate Oil Compact Commission will hold a session.

Entertainment will be offered in a wrestling match at the Coliseum, a yacht trip on the Houston Ship Channel and through the harbor to the San Jacinto battleground with luncheon at the San Jacinto Inn.

The refinery engineering conference will take place during the entire day of Friday. The following papers will be presented:

Friday morning—9:30 to 12 noon:

"Production of Organic Chemicals for Petroleum and Natural Gas," by Dr. C. R. Wagner, Dr. M. B. Cooke and S. R. Swanson; Pure Oil Co. and Alco Products, Inc.

"Catalytic Polymerization and Its Application in Refining," by Dr. Gustav Egloff, Universal Oil Products Co.

JOHN R. SUMAN
President Oil-World Exposition

"Combination Selective Cracking," by Dr. E. R. Smoley, Lummus Co.

Friday afternoon—1:30 to 5 p.m.:

"Metallurgy in Petroleum Refining Processes," by E. S. Dixon, Texas Co.

"Gasoline Treating and Sweetening Processes," by Dr. C. W. Ripple, Solvay Sales Co.

"Extraction of Salts from Refinery Stocks by Electrical Process," by T. N. St. Hill and G. B. Hanson, Petroleum Rectifying Co.

The program has been arranged and will be conducted by the Refinery Committee which consists of W. H. Curtin, W. H. Curtin & Co., chairman; Ed G. Lenzner, general manager, Oil-World Exposition, Inc., vice chairman; O. E. Berg, Babcock & Wilcox Tube Co.; M. N. Dannenbaum, M. N. Dannenbaum Co.; R. L. Mallory, Brown Instrument Co.; Joe Miller, Humble Oil & Refining Co.; Joe Peddie, Maintenance Engineering Corp.; and George Reid, The Refiner.

This committee has been assisted by an advisory board consisting of refinery executives, superintendents, technologists and engineers affiliated with 50 refining companies operating in Texas, Louisiana and Arkansas. Practically all of these companies have definitely arranged for as many as possible of their key men to be in attendance at both the refinery engineering conference and at the conference on refinery control and measurement on the two preceding days. They will also be active at the refinery chemists program on Tuesday, at which papers of value to refinery operators will be delivered.

The annual banquet of the Independent Petroleum Association will be held at 7 p.m. at the Rice Hotel.

On Saturday, the closing day of the exposition, there will be the judging of new patents at the session of the new patents and inventions committee. The safety and first aid committee will have a luncheon at 12:30 p.m., the first aid contests taking place during the day. The football game between the teams of Rice Institute and Tulsa University at Rice Stadium will prove a magnet to many visitors.

Kansas Allowable Is Reduced As Pipe Lines Hint Proration

The basic oil allowable production for Kansas in October was set at 193,800 bbls. daily by the Corporation Commission, following a hearing in Wichita Friday when representatives of some pipe line companies urged a reduction in allowable and indicated they would prorate their purchases unless this was done.

The October allowable is 6,100 bbls. daily under the Bureau of Mines recommendation of 199,900 bbls. daily, and is a reduction of 2,450 bbls. daily from the September allowable of 196,250 bbls. daily.

J. K. McGoldrick of Tulsa, speaking for Kaw Pipe Line Co., which runs approximately one-fourth of the state's production, told the commission his company might have to prorate pipe line runs unless allowable production was reduced for October. The Kaw company is owned jointly by Texas Co., Phillips Petroleum Co. and Cities Service Oil Co. The Kaw lines have been running an average of 55,765 bbls. of Kansas crude daily during September, compared with its nominations of 48,000 bbls., and cannot continue to take this excess.

Don Ryan of Wichita, Stanolind Crude Oil Purchasing Co., said it was the belief of Stanolind the October output should not be more than 180,000 bbls. daily, a sharp reduction being necessary to equalize overproduction in the Mid-Continent. Stanolind already is prorating its runs in Ellis County pools to 80 per cent of the allowable.

E. F. Guidinger, manager of crude oil purchases and sales for Phillips Petroleum Co., estimated his company would require only 18,000 bbls. of Kansas crude daily in October, a reduction of 3,200 bbls. daily.

The only company to ask for an increase was Continental Oil Co., which, R. Van A. Mills told the commission, would take 9,450 bbls. daily, an increase of about 2,000 bbls.

The commission also fixed the October gas allowable for the Otis field of Rush and Barton counties at 750,000,000 feet daily, more than double the September allowable of 355,000,000 feet. The increase was due to higher demand for heating purposes in northern cities.

the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

A Raw Deal

The chief topic in the oil industry today is the trial to be begun at Madison, Wis., next Monday, the most important legal proceeding involving the petroleum industry in the 26 years since the dissolution of the Standard Oil Company.

Whatever may be the outcome as to the defendants, the oil industry as a whole deeply and rightly resents the manner in which this case has been sensationalized to brand an entire industry as criminals.

If units or individuals in the industry had misunderstood the policy of the administration and, if as a consequence the program for stabilization previously approved by officers of the government had been continued in technical violation of the latest interpretation of the antitrust law, warning to stop such practices would surely have been heeded. This has been the common course pursued by the Federal Trade Commission.

The Trade Commission's orders furnish no headlines and involve no costly litigation, but get results.

In the 47 years since the Sherman antitrust act became law the wide anticipations which heralded its enactment have been disappointed. Its chief use has been in political barnstorming.

The public, seeing only the spectacular headlines in the newspapers, is ready to believe the worst. The industry has been the butt of politicians for years and a popular psychology has been built up predisposed to swallow any accusation however stupid or extravagant as proof positive.

The administration, determined on regimentation of business and industry and smarting under the collapse of NRA, could not have wished for any thing better than an opportunity to institute criminal proceedings under the antitrust law involving the oil industry.

The fact that criminal action was begun rather than the more customary cease and desist injunctions or consent decrees offered license for more startling headlines and for political "pep-talks." And the oil business was always fair game with no closed season.

The resulting public misconception is the more destructive because the matter returns to public notice on the eve of the assembling of state legislatures hard pressed for additional revenue for enlarged expenditures and notoriously ready to turn to the oil industry as the scapegoat.

The tax-levying bodies may easily assume that with the popular mind inflamed against the oil industry they will have general approval in going the limit in imposing additional discriminatory taxation upon it.

It is a sad commentary on present day sanity and intelligence that one of the country's greatest industries which has consistently served the public faithfully and well with an essential product of constantly improving quality and at modest cost should be so persistently misjudged and vituperated.

There is no "news value" in the constructive achievements of the oil industry. That does not lend itself to sensational display. The petroleum industry was among the first to emerge from the depression and the first to struggle towards stability, yet the cost of its products to consumers has remained the lowest of all commodities.

But let a pretext appear to besmirch the industry and throw a blot on its reputation that will take years to erase and it is hungrily seized to make a sensation or a campaign appeal.

Oil men who deserve well of their country resent this defamation and the constant harrying amounting to persecution which monopolizes time they should be devoting to their own business and wasteful expenditures of millions that could be employed in improving their products and their service to the public. This is the true cost.

Soviet Changes From Exporter to Importer of Petroleum

By WILLIAM J. KEMNITZER

Should the Soviet quotas for the petroleum industry be attained, the quotas set are themselves out of line in a downward direction with the expansion of units that are consumers of petroleum.

Prior to 1934, exports of benzine exceeded the domestic consumption of that product. It is only since 1934 that domestic demand for benzine has become so large that exports of this product have been curtailed drastically. In 1935, despite a reduction of more than 50 per cent in exports, stocks of benzine were actually drawn upon to the extent of about 168,000 tons. In 1936, a slight addition is reported to stocks, but 46,000 tons had to be imported. These facts in light of a demand that is increasing at a far greater rate than production indicate that stocks are not being built up in line with the requirements of domestic consumption. This condition is not a product of the past year, but has been going on year after year since 1932. When consumption continues to increase at a rate faster than the increase in production it is axiomatic that the days' supply on hand in stocks must fall.

That the output of automotive units is likely to continue expanding at the present rate is probable because the U.S.S.R. is still far from being a "motorized" country. That is to say, the country is so large both in area and population and so determined to expand industrially that progress along these lines, barring unforeseen events, is certain to continue at a rapid pace. This conjecture is further evident when one considers that although there are not more than 375,000 automobiles and trucks in the U.S.S.R. at present, the annual output of these units which was less than 1,000 in 1928, reached nearly 24,000 in 1932, more than 96,000 in 1936, and is set for 220,000 in 1937. In the United States approximately 26,000,000 automobiles and trucks are in use. Although it will be a long time before the average citizen in the Soviet Union will drive a motor car of his own, the output of automobile units is destined to be high.

TABLE 7.—BALANCE OF SUPPLY AND DEMAND OF BENZINE (PLUS LIGROIN) IN U.S.S.R., 1929 TO 1936 INCLUSIVE, BY YEARS

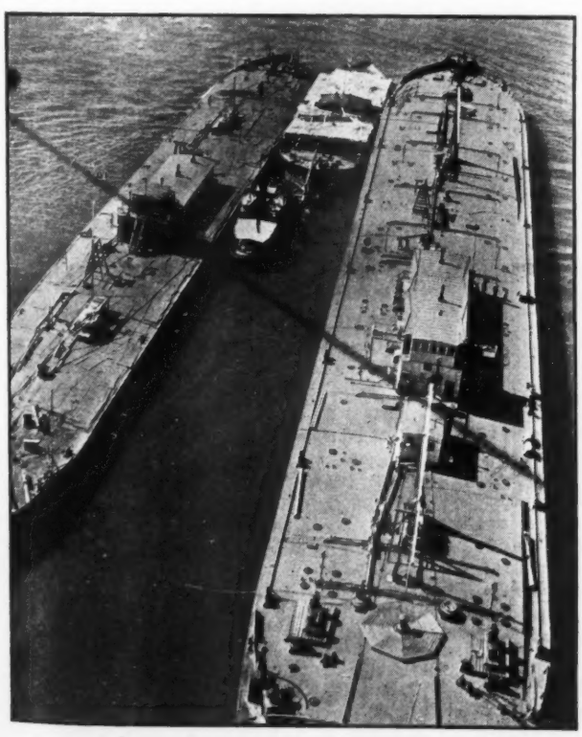
(In thousands of metric tons)

Year—	Domestic production	Imports	New supply	Change in stocks	Total demand	Exports	Domestic consumption
1929	1,263	..	1,263	+22	1,241	1,100	141
1930	1,960	..	1,960	+136	1,824	1,470	354
1931	2,756	..	2,756	+353	2,405	1,782	623
1932	2,881	..	2,881	+9	2,872	1,972	900
1933	2,655	..	2,655	+301	2,351	1,260	1,091
1934	2,773	..	2,773	+177	2,596	1,119	1,477
1935	3,006	..	3,006	—168	3,234	658	2,576
1936	4,212	46	4,258	+51	4,207	419	3,788

TABLE 8.—EXPORTS OF CRUDE PETROLEUM AND REFINED PRODUCTS FROM THE U.S.S.R., 1929 TO 1936 INCLUSIVE, BY YEARS

(In thousands of metric tons)

Year—	Crude petroleum	Benzine plus ligroin	Kerosene	Fuel oil	Lubricating oils	Other products	Total exports
1929	310	1,097	788	1,119	278	266	3,858
1930	294	1,454	781	1,448	294	443	4,714
1931	382	1,656	771	1,719	272	494	5,295
1932	526	2,018	829	1,870	232	631	6,117
1933	526	1,296	570	1,534	292	677	4,930
1934	459	1,120	436	1,301	305	651	4,315
1935	207	658	416	1,134	308	612	3,368
1936	106	419	383	825	300	600	2,633



Oil tankers on the Volga River at Stalengrad

The Soviet government has a monopoly on foreign trade in petroleum. By virtue of this monopoly it is the sole exporter and importer of petroleum and has complete control over the amount and timing of petroleum trade.

Up to 1935, the U.S.S.R. was predominantly an oil-exporting country. The peak year for exports was 1932 when the total for all petroleums reached 6,117,000 tons. It was this policy of continued exports and alleged infringement on world markets which gave the older established marketers of other countries so much concern. After 1932, but more noticeably since 1935, exports of petroleum from the U.S.S.R. have fallen off until at the present time they are almost negligible. As a matter of fact, quite the opposite policy has taken place, and for some time now, regular shipments of gasoline have been coming into the U.S.S.R. at Vladivostok from California on board Soviet tankers.

This change of position from exporter to importer of petroleum is believed to be of necessity rather than of choice. The present relationship between the demand and supply of motor fuels is attributed to the inability of the Soviets to produce, and not to any predetermined arrangement as a part of the economic plan. This conclusion is evidenced by the fact that at the same time that exports of benzine have been reduced by 70 per cent from the peak of shipments made in 1932, it has been necessary to resort to imports. Simultaneously, exports of other products have dropped materially; exports of crude oil, for example, have fallen off by 80 per cent from 1932 to 1936; of kerosene by 54 per cent; fuel oil by 56 per cent; and of all petroleums by 57 per cent.

This is the second installment of Mr. Kenmitzer's article begun last week.

Manifestly, the export trade cannot be revived until domestic requirements (i.e. domestic consumption plus additions to stocks) have been satisfied. Study of the refining and production problems of the Soviet petroleum industry, indicates that development of any surpluses for export in the near future is problematical.

The distribution of benzine within the Soviet Union is simple. Wholesale as well as retail stores and filling stations are under direct control of the distributing department of the chief administrator of the petroleum industry. The largest consumers, all of which are state-controlled organizations, draw their fuel and other petroleum supplies from local filling stations. The amounts of fuel deliverable to them are fixed by government plans. Individual consumers, of which there are comparatively few, get special tickets from the local officer of the petroleum distributing organization against cash. In this category, tickets are given, however, only for limited quantities of fuel. They then draw their supplies from local filling stations upon presentation of the fuel tickets.

There are no filling stations in the Soviet Union similar to those in other countries where anyone can drive up and purchase gasoline. In the strict sense of the term, benzine and other supplies can be obtained only at a limited number of government distributing stations, which themselves may

be used only by special arrangement. Persons motoring outside their place of residence must obtain advance permits, applicable to specific towns or districts. Only on the strength of these permits can they then purchase gasoline at other distributing points. No statistics are available on the number of filling stations in the Soviet Union.

Prices are in Soviet rubles, and are not comparable to prices in other currencies since the ruble has no accepted or standard exchange value. The advertising of motor fuels under such conditions would serve no useful purpose and consequently is not practiced. Consumers, mostly government employes, take what fuel is allotted to them without questioning, and have little knowledge or curiosity about the technical qualities of the fuel or the possibilities of improving it.

Benzine for domestic use is not at all plentiful at present in the U.S.S.R. The government has taken steps to induce and compel government employes to economize in the use of motor fuels. In the army, premiums and rewards have been offered to members who show a record of economy in the use of petroleum products.

(To be continued)

Forecast of Demand for Motor Fuel and Crude in October

The daily average production of crude oil estimated by the Bureau of Mines to meet the demand in October, 1937, is 3,568,100 bbls., or 58,800 bbls. higher than the daily average estimated for September, 1937. This is 477,900 bbls. (15 per cent) higher than the actual daily production for October, 1936, and 12 per cent higher than the actual demand for domestic crude for that month. The increase in crude oil demand indicated for October, 1937, may be ascribed principally to an abnormal export situation and to unusually low gasoline yields due to the growth in fuel oil demand.

Current situation.—Crude oil production during the five weeks July 31 to September 4 averaged about 3,714,000 bbls. daily. During that period crude oil stocks increased 2,167,000 bbls. net, of which 1,630,000 bbls. was in domestic grades, indicating a daily demand for domestic crude during this period of 3,667,000 bbls.

Runs to stills.—Natural gasoline consumption at refineries in October is estimated as 8.6 per cent of the total gasoline required, or 4,290,000 bbls. The yield of straightrun and cracked gasoline is estimated as 43.936 per cent, which when applied to the estimated straightrun and cracked gasoline production of 45,610,000 bbls. gives refinery crude oil requirements as 103,810,000 bbls., or 3,349,000 bbls. daily.

Imports.—Foreign crude run to stills is estimated as 2,700,000 bbls., 200,000 bbls. less than the previous month's estimate.

Exports, fuel and losses.—Crude oil exports have been increased in accordance with the upward trend and the anticipated military needs to 6,400,000 bbls., compared with the 5,600,000 bbls. estimated for September. The estimate for crude oil burned as fuel and losses has been increased in accordance with the usual seasonal change to 3,100,000 bbls., 100,000 bbls. higher than for September.

Domestic demand.—October is one of the most difficult months in the year for forecasting motor fuel demand. The bureau has estimated the October demand as 48,550,000 bbls., or 10 per cent higher than the actual for October, 1936.

Exports.—Exports of motor fuel for October have been raised in anticipation of a continuing heavy demand, both normal and military, to 3,250,000 bbls., 250,000 bbls. higher than the September estimate.

Stocks.—Stocks of finished and unfinished gasoline amounted to 70,120,000 bbls. on July 31, 1937. According to the American Petroleum Institute, gasoline stocks were reduced about 3,600,000 bbls. during August, which would place them at approximately 66,500,000 as of August 31. If the estimated September reduction of 2,800,000 bbls. is accomplished, stocks of gasoline will amount to about 63,700,000 bbls. on September 30. The bureau estimates a further reduction of 1,000,000 bbls. for October, which would place gasoline stocks on October 31, 1937, about 5,000,000 bbls. higher than for last October.

Gasoline production.—Benzol and "direct" sales and losses of natural gasoline have been estimated as 900,000 bbls., making the estimated production of gasoline 49,900,000 bbls., or 1,610,000 bbls. daily. This is distributed among the various districts as follows (thousands of barrels): East Coast, 7,340; Appalachian, 1,820; Indiana-Illinois, 8,730; Oklahoma, 3,300; Kansas-Missouri, 2,890; Texas Inland, 4,020; Texas Gulf, 11,020; Louisiana Gulf, 1,630; North Louisiana-Arkansas, 960; Rocky Mountain, 1,170; California, 7,020.

TABLE 1—ESTIMATE OF REQUIRED OIL PRODUCTION BY STATES

(Daily average in barrels)

States—	Forecast Oct., 1937	Forecast Sept., 1937	Actual production July, 1937
Texas	1,430,300	1,413,600	1,415,700
California	660,000	638,200	663,700
Oklahoma	629,200	633,600	648,100
Louisiana	254,600	247,900	257,500
Kansas	199,900	200,900	207,300
New Mexico	106,400	101,400	110,500
Wyoming	57,300	55,900	52,200
Pennsylvania	55,500	53,600	54,500
Michigan	43,500	40,400	42,000
Arkansas	36,000	29,900	27,600
Montana	17,600	18,200	16,800
Illinois	17,300	14,600	17,100
Kentucky	16,700	17,000	15,700
New York	15,800	15,800	15,600
West Virginia	10,500	10,300	10,600
Ohio	10,400	10,500	10,200
Colorado	4,500	5,000	4,100
Indiana	2,600	2,500	2,400
Total	3,568,100	3,509,300	3,571,600

Industry's Attention

(Continued from Page 25)

Association. Neither of these associations was indicted, however.

It is an open secret the defendants will base a large part of their defense on the contention that this program for purchasing so-called distress gasoline from independent refiners was begun during the code period at the suggestion or at least with the approval of Secretary Ickes and the Petroleum Administrative Board, that its purpose was to stabilize the industry and not to increase gasoline prices to jobbers or to consumers, and that continuation of the buying program after the termination of the oil code was in line with President Roosevelt's plea to industry to continue the objectives of NRA by voluntary measures.

The second Madison indictment, dated November 6, 1936, contains three separate but related counts. It names as defendants 19 oil corporations and 46 individuals, most of them officers or agents of the defendant oil companies. It charges a conspiracy, running back to 1931, to put the independent oil jobber out of business by fixing his margins at a figure below his operating costs. It likewise applies to the mid-western area. The first count charges that the defendant major oil companies and their officers held periodic meetings at which they fixed uniform contracts for the sale of gasoline to jobbers, narrowing the jobbers' price margins and substantially restraining competition among themselves in soliciting jobber accounts. The second count charges that the major companies in the same manner agreed on various uniform terms for jobbers' contracts, all of which restricted the jobbers' ability to make a profit. The third count charges the majors with a number of agreements designed to reduce the number of independent jobbers operating in the oil business in the mid-western area.

Witnesses Called by U. S.

The following will be called as witnesses for the United States:

Robert N. Cline, Tyler, Tex.; D. D. Ginter, Kansas City; John A. Getgood, Chicago; R. L. Alexander, New York; M. G. Peeters, Milwaukee; P. H. Hertzog, Kilgore, Tex.; Charles S. Smith, Cleveland, Ohio; Harry C. Jenkins, Des Moines; E. M. Kelly, Bartlesville, Okla.; H. Jacobs, St. Louis; John Dawes Ames, Chicago; B. F. Stradley, Bartlesville, Okla.; E. A. Kermott, Kansas City; Mrs. Constance C. Packard, Washington, D. C.; George Kinter, Tulsa; T. J. Heard, Shreveport; H. J. Muller, New York; E. M. Crone, New York; Charles W. Snider, Chicago; Wm. J. Burker, New York; P. W. Riggins, Fort Worth; G. Gordon Brownell, New York; W. T. Dinkins, Fort Worth; R. L. Bosworth, Ponca City, Okla.; J. V. Dippel, Kansas City; Charles J. Barkdull, Chicago; E. R. Lederer, Fort Worth; J. G. Sinclair, Chicago; D. A. Brown, Eldorado, Ark.; R. H. Dangerfield, St. Louis; J. H. Rohmer, New York; Phillip R. Phillips, Bartlesville, Okla.; G. A. Booth, Chicago; C. E. Davis, St. Louis; R. S. Orr, Wichita, Kans.; H. L. Stegall, Houston, Tex.; John C. Day, Tulsa; J. F. M. Taylor, St. Louis; T. E. Swigart, Houston; W. L. Schafer, St. Louis; Emby Kaye, Tulsa; E. J. Glover, Duncan, Okla.; L. H. Poland, Kansas City; A. W. Frey, St. Louis; Clara Gartman, Tulsa; A. P. Ruether, St. Louis; J. P. Mosher, Jr., Cleveland, Ohio; Julius G. Evans, Tulsa; J. D. Collins, New York; Adolph H. Sus, Chicago; Keith Fanshier, Chicago; L. S. Wescoat, Chicago; William Lanzer, Chicago; Hildred Dungan, Wichita, Kans.; R. E. Everett, Wichita, Kans.; R. C. Cocanower, Vernon Tex.; Walter Paul Jacobi, Tulsa; Neil Buckley, Tulsa; J. M. Bradshaw, Dallas, Tex.; John Steiger, Tulsa; Oscar L. Peterson, Chicago, George C. Peterson Co., Chicago; Elmer H. Pedley, D. B. Pedley & Sons Co., Kenosha, Wis.

Barnsdall Refining Corp., and its president, E. B. Reeser, will be required to stand trial with other defendants October 4 under a decision by Judge Stone, who denied a severance motion on the ground the company was not organized until after the conspiracy was alleged to have started.

The government consented to a separate trial for F. R. Coates, vice president of Cities Service Export Oil Co. He is seriously ill, as is Edward Karstedt, Denver, former Continental Oil vice president, who would be called at this time. The remaining eight are John A. Brown, president of Socony Vacuum; D. W. Harris, Shreveport, La., general manager of Louisiana Oil; Keith Fanshier, petroleum editor, Chicago Journal of Commerce, subpoenaed as a witness; Bernard L. Majewski, Chicago, Deep Rock vice president; and four Gulf Oil officials who have appealed removal orders—J. F. Drake, W. V. Hartmann and H. C. Meyer, all of Pittsburgh, and O. H. Carlisle, Houston, Tex.

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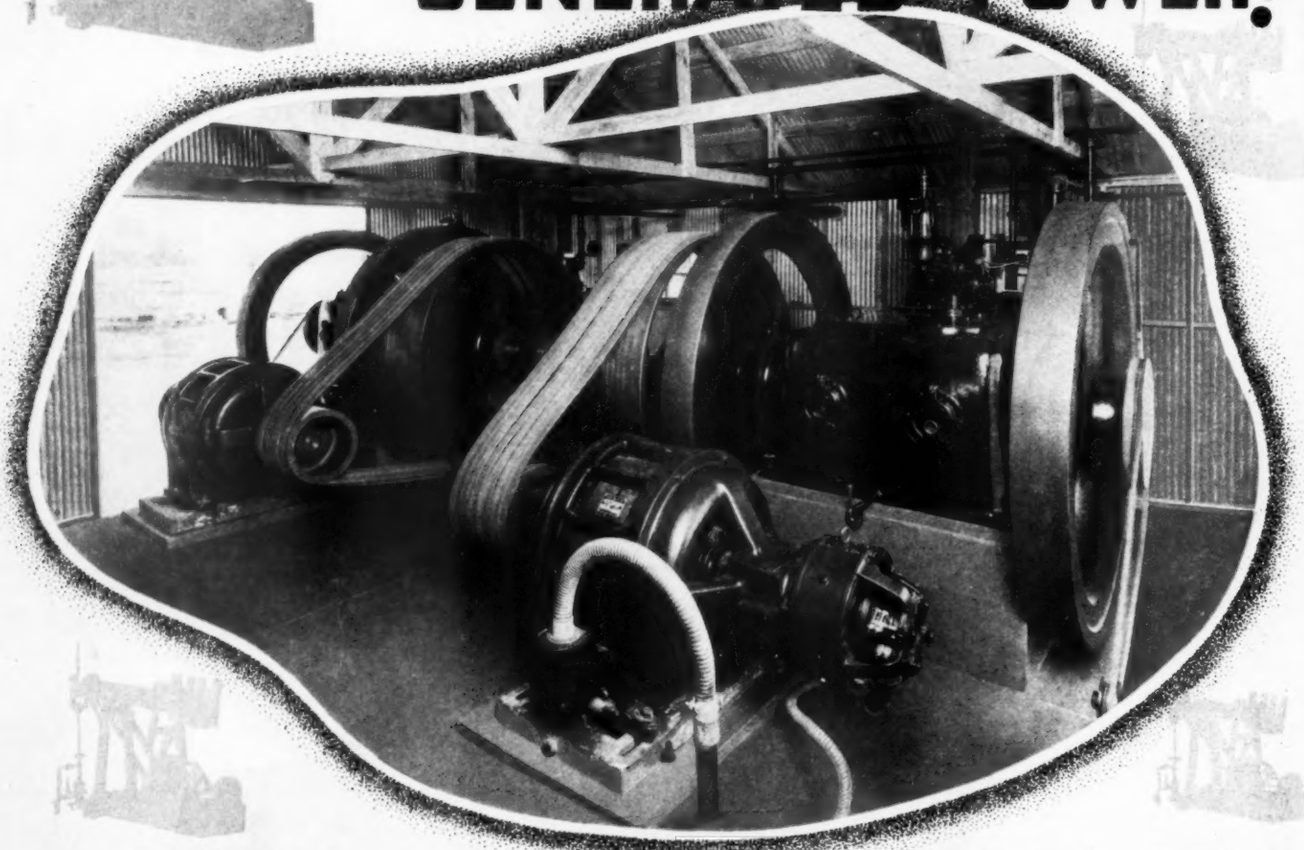

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Natural Gas Sessions Feature of A.G.A. at Cleveland, Ohio

CLEVELAND, Ohio, Sept. 30.—The nineteenth annual convention of the American Gas Association opened Monday morning with the sessions of the Natural Gas Department at the Hotel Cleveland and the annual meeting of the Association of Gas Appliance and Equipment Manufacturers at the Hotel Statler. Sunday had been observed as official American Gas Association day at the Cleveland Great Lakes Exposition.

George E. Welker, United Natural Gas Co., Oil City, Pa., chaiman of the Natural Gas Department,

N. C. McGowen, new president, A.G.A.

opened that session, followed by an address by Herman Russell, Rochester Gas & Electric Corp., Rochester, N. Y., president of the American Gas Association. Alexander Forward, managing director of the association, also spoke.

The morning session was occupied by a paper on "Meeting Competition," by F. M. Banks, Southern California Gas Co. That on "Modern Methods of Applying Gas to Large Power Boilers," by L. S. Regan, Webster Engineering Co., Tulsa, was not read, Mr. Regan being unable to attend.

At the afternoon session William T. Rasch, American Gas Products Corp., New York, and president of the Association of Gas Appliance and Equipment Manufacturers, explained the New York World Fair in 1939 to the assembled gas men.

A. A. Nicholson, Texas Corp., New York, presented a paper on "2,000 Years of Progressive Evolution of the Worker."

William A. Dougherty, Gas Companies, Inc., New York, discussed legislation and taxation, topics of increasingly serious import to utility companies.

The report of the American Gas Association nominating committee was followed by the election of officers for the association as follows:

President—N. C. McGowen, president, United Gas Public Service Corp., Shreveport, La.; first vice president—Conrad N. Lauer, president, Philadelphia Gas Works Co., Philadelphia, Pa.; second vice president—Walter C. Beckjord, vice president, Columbia Gas & Electric Corp., New York; treasurer—J. F. Rooney, assistant to executive vice president, Consolidated Edison Co. of New York.

Directors—two year terms: F. H. Adams, vice president, Surface Combustion Corp., Toledo, Ohio; Charles M. Cohn, vice president, Consolidated Gas, Electric Light & Power Co., Baltimore, Md.; J. S. DeHart, Jr., president, Isbell-Porter Co., Newark, N. J.; L. B. Denning, president, Lone Star Gas Co., Dallas, Tex.; C. E. Gallagher, president, East Ohio Gas Co., Cleveland, Ohio; George S. Hawley, president, Bridgeport Gas Light Co., Bridgeport, Conn.; B. J. Mullaney, vice president, Peoples Gas Light & Coke Co., Chicago; Otto Snyder, president, New York Power & Light Co., Albany, N. Y.; T. J. Strickler, vice president, Kansas City Gas Co., Kansas City, Mo.

The following members were nominated by section nominating committees to serve as section officers for the next association year:

Natural Gas Department: Chairman, Robert W. Hendee, Colorado Interstate Gas Co., Colorado Springs, Colo.; vice chairman, Thomas R. Weymouth, Columbia Gas & Electric Corp., Pittsburgh, Pa. Nominating committee: William Moeller, Jr., Southern California Gas Co., Los Angeles, Calif., chairman; Frank L. Chase, Lone Star Gas Co., Dallas, Tex.; John B. Tonkin, Peoples Natural Gas Co., Pittsburgh, Pa.

Manufacturers section: Chairman, Merrill N. Davis, vice president, S. R. Dresser Manufacturing Co., Bradford, Pa.

The annual meeting of executive, managing and advisory committees of the Natural Gas Department was held at the Terminal Club Monday evening. At a Tuesday noon luncheon conference the committee on personal practices, E. A. Nicol was chairman and V. W. Conover, United States Steel Corp., New York, talked on "Practical Attitudes Toward Industrial Relations."

The general sessions of the association began Tuesday morning with a report from Treasurer Joseph F. Rooney.

Frank H. Adams, Surface Combustion Corp., Toledo, Ohio, spoke on "Serving American Industry," and Walter C. Beckjord, Columbia Gas & Electric Corp., on "What the Gas Industry Must Do Next."

N. C. McGowen, president of United Gas Public Service Corp., Shreveport, Pa., incoming president of the association, impressed upon the members that conservation is an industry opportunity and responsibility.

The sessions of the accounting section, occupied the afternoons of Tuesday and Wednesday and were to continue Thursday afternoon.

The commercial section, of which F. M. Banks, Southern California Gas Co., was chairman, held sessions at the same times, devoted largely to appliances, refrigeration and home service. H. O. Loebell, Natural Gas Pipeline Co. of America, Chicago, presented a paper on "Gas Appliance Needs of the Industry." The home service section had a breakfast program Wednesday.

Particular interest attached to the session of the technical section which began Tuesday afternoon with M. I. Mix, Peoples Gas Light & Coke Co., Chicago, as chairman. A report was received from the gas production committee, R. E. Kruger, Rochester Gas & Electric Co., chairman. Louis Shnidman, Rochester Gas & Electric Corp., and Jesse S. Yeaw reported on corrosion of metals

R. W. Hendee, new chairman, Natural Gas Department

and alloys by flue gases. Prof. C. C. Furnas, Yale University, reviewed the principles of gas scrubbing.

F. E. Frey, Phillips Petroleum Co., Bartlesville, Okla., and J. S. Carey, M. W. Kellogg Co., New York, explained what polymerization means to the oil industry. M. A. Hardie, Jr., Montana Power Co., discussed freezing of regulators and its prevention.

Before the chemical committee, J. F. Anthes, Brooklyn Union Gas Co., chairman, Dr. Scott Ewing presented a paper on corrosion in soils as a factor in selection of pipe materials (page 51 this issue of The Oil and Gas Journal).

This being the first convention of the association held in Cleveland, it offered exceptional opportunity to visiting gas men to inspect the testing laboratory established by the association and located in Cleveland. Two past presidents, R. W. Gallagher, vice president of Standard Oil Co. (New Jersey), and B. J. Mullaney, vice president Peoples Gas Light & Coke Co., Chicago, spoke during the two one-hour sessions Wednesday.

Refinery Expansion

Coking Drums Towed from New York to Whiting, Indiana

NEW YORK.—One of the strangest freight shipments ever made in the United States was recently made from M. W. Kellogg Co's. plant in Jersey City, N. J. It consisted of four coking drums whose dimensions prohibited their shipment by rail, steamer or barge. As each drum was 60 feet long and 16 feet in diameter, and weighed 175,000 pounds it was necessary to load them on special flat cars at the plant for transfer to New York Bay.

At New York Bay the drums were placed in the water, lashed together in pairs with strong steel cables and were protected from contact damage by heavy timbers securely fastened lengthwise. The manholes and all extending projections were also protected by boxes of heavy lumber bolted securely in place. For the trip up the Hudson River and through the three Great Lakes one large, ocean-going tug handled the tow but in the New York State Barge Canal and more congested waters the services of another tug were provided to prevent accidents.

The shipment of the four drums served as a dress rehearsal for the transfer of a mammoth low pressure evaporator tower which is to be shipped by Kellogg to Whiting about October 15. This tower is 80 feet long, 15 feet in diameter, has walls 2 5/16 inches thick and weighs 460,000 pounds. It, also, will be towed to its destination, but because of its extreme size and the fact that there is not sufficient depth of water in the Erie Canal between Syracuse and Buffalo to permit its passage, it will have to proceed through New York State Barge Canal to Oswego on Lake Ontario and thence through Lake Ontario and through the Welland Canal into Lake Erie and Lake Huron into Lake Michigan to Whiting, a total distance of 1,371 miles.

Cotton Valley Refinery to Be Built by Octane Oil

SHREVEPORT, La.—Octane Oil & Refining Co. will construct a refinery in the near future in the Cotton Valley field, Webster Parish, with a daily capacity of 3,000 bbls. The announcement of intention to build this refinery was made after a conference was held between the officials of the above company and Governor Leche relative to obtaining the 10-year tax exemption on new industrial construction.

The company has already started building a double track loading rack, having a capacity of 24 tankcars. The refinery will begin operation by refining distillate which is being produced by the deep wells in this field and will probably use some of the shallow crude production later on.

Talco Oil Company Forms New Asphalt Department

DALLAS, Tex.—Formation of an asphalt research and service department for the Talco Asphalt & Refining Co. of Dallas and Mount Pleasant, Tex., has been announced by Capt. J. F. Lucey, president. The new department includes some of the most experienced asphalt engineers and consultants in the industry, Captain Lucey said. Among those added were John S. Williams as head of the company's asphalt department and director of asphalt sales; Leroy M. Law, consulting asphalt technologist; Don Lee, highway technologist; and C. L. Brock, asphalt research chemical engineer.

The company's $2,000,000 plant at Mount Pleasant, furnished with a supply of heavy asphalt-base crude from its owners' 34,000,000-bbl. crude reserve in the Talco field 20 miles away, is rapidly nearing completion. Several units of the large plant, located on a 70-acre tract just outside Mount Pleasant and along the St. Louis & Southwestern Railway tracks, already are in operation. Additional units are being rushed to completion with the entire plant to be operating at full capacity by the middle of October, Captain Lucey said.

General Petroleum Contracts for New Combination Unit

NEW YORK—A new combination viscosity breaking and cracking unit at its Torrance, Calif., refinery has been contracted by General Petroleum Corp. with the Lummus Co. of New York. Design of the plant is now under way and construction will be launched in a few weeks. The plant is to be designed for operation on approximately 14,000 bbls. of heavy residual oil per day. Other improvements and expansions are to be made at Torrance in its general program involving total expenditure of approximately $850,000.

Second W.P.R.A. Meeting To Be Held in Tulsa

The second in the 1937 series of regional technical meetings arranged by the manufacturing committee of the Western Petroleum Refiners Association will be held at Hotel Mayo in Tulsa, Tuesday, October 5. The program will include discussions of the Bureau of Mines in relation to the refining industry, new methods of diesel fuel manufacturing and liquid coking operations. The program for the Tulsa meeting: "The Bureau of Mines and the Oil Industry," Boyd Guthrie, Bureau of Mines, Bartlesville, Okla.; "Diesel Fuels," T. B. Rendell, Shell Petroleum Corp., Woodriver, Ill.; "Liquid Coking Operations," C. W. Berger, Globe Oil Co., McPherson, Kans.

The third meeting in the series will be held in Shreveport, October 22.

Barnsdall's Okmulgee Plant To Shut Down Indefinitely

Barnsdall Refining Corp. has announced that its Okmulgee, Okla., refinery will be closed down for an indefinite period on October 1. The company now has a new 5,000-bbl. plant under construction at Corpus Christi, Tex., which will be completed in the near future. G. T. Granger, former superintendent of the Okmulgee plant, has been transferred to Corpus Christi.

Natural Gasoline

Cabot and Gulf Oil Erect Gas Purifying Plants

LOUISVILLE, Ky.—Cabot Carbon Co. has recently completed and placed in operation a Girbotol purification unit in its new gasoline plant at Kermit, Tex. The unit removes hydrogen sulfide from natural gas used as engine fuel and for domestic heating. The process will also be used by Gulf Oil Corp. for removing carbon dioxide from synthetic hydrogen in the company's new iso-octane plant now under construction at Port Arthur, Tex.

Taft C.N.G.A. Chapter Holds Dinner Meeting

LOS ANGELES, Calif.—Holding its first meeting of the fall season, the Taft chapter of the California Natural Gasoline Association met Thursday, September 16, in the banquet room of the Hotel Taft with 50 members and guests in attendance.

After a short business meeting, M. J. Binkley presented a report of the chapter's annual Hi-Jinks. The letter of resignation of L. F. Watson, Chanslor-Canfield-Midway Oil Co., was read and E. J. Lyon, of Standard Oil Co., was elected to fill his unexpired term as secretary and treasurer of the chapter.

J. C. Burks, president of the association, gave a talk on "The Purpose and Work of the California Natural Gasoline Association." Points stressed by Burks were that the association has done much to aid the industry in the way of standardization, that much knowledge and experience is gained through close association of members, and that knowledge is likewise gained through the presentation of papers on the latest phases of the industry at regular meetings.

Carbon Black Sales Running 28 Per Cent Ahead of 1936

Sales of carbon black of the Columbian Carbon Co. are reported running about 28 per cent ahead of 1936. If the increased rate is maintained Columbian's production this year will attain approximately 135,000,000 to 136,000,000 pounds. Output last year by the company totaled 106,236,020 pounds.

Columbian's sales of natural gas last year experienced considerable expansion as large gas wells were brought into production. These sales amounted to 49,470,618,000 feet, against 39,921,810,000 feet in 1935. The company has extended its program and is drilling 15 wells in the Oriskany sand in Kanawha County, West Virginia. It recently brought in the largest well in that field, the Mary C. Young with a natural flow of 20,000,000 feet.

The company has added to its sales outlets for gas, which it sells largely to pipe lines serving large cities in the eastern and southern sections of the country, and which it utilizes partly in its own manufacturing operations. New contracts include one with the Carbide & Carbon Chemical Corp. for natural gas at the South Charleston, W. Va., plant, and another to supply gas from its wells in Grant County, Kansas, to the Panhandle Eastern Pipe Line Co.

Natural Gas News

George Wehrle Honored for Service to Gas Industry

CLEVELAND, O.—One of the highest honors of the American Gas Association was conferred September 29 on George Wehrle, superintendent of the gas department of the Public Service Co. of Colorado, Denver, Colo., at the annual convention in Cleveland, Mr. Wehrle received the Charles A. Munroe Award for having made the most outstanding contribution of an individual toward the advancement of the gas industry.

The award was made to Mr. Wehrle for his distinguished work in directing the solution of the problems attending the conversion of the Denver system from manufactured to natural gas in the summer of 1928 and other problems which arose within his company during the subsequent nine-year period. In the opinion of the Charles A. Munroe Award Committee, these problems, a great many of which had not arisen previously in the gas industry, required a large measure of originality, ingenuity and pioneering.

As rapidly as the engineering and economic validity could be determined, the solutions were shared by Mr. Wehrle with the entire gas industry and proved extremely valuable in conversions subsequently made by other companies.

Mr. Wehrle has spent his active lifetime in the gas industry commencing in 1901. Born on May 11, 1881, he was educated in the public schools. When 20 he entered the employ of the Peoria Gas and Electric Co. In February, 1908, he joined the Clarksville Gas Co., Clarksville, Tenn., as superintendent, and in September of the same year became superintendent of the gas department of the Chattanooga Gas Co. In November, 1909, he was appointed superintendent of the Pintsch gas department of the Denver Gas and Electric Co., becoming assistant superintendent of gas manufacture in 1911 and assistant superintendent of the gas and steam heating department in 1914. He was appointed general manager of the Niagara Light, Heat and Power Co., Tonawanda, N. Y., in May, 1918, but returned to the Denver company as superintendent of the gas department.

The Charles A. Munroe Award consists of a substantial financial acknowledgment and engrossed certificate. The award committee consisted of F. C. Weber, chairman, C. W. Bradley, and F. F. Schauer.

Natural Gas Shortage at Mount Pleasant, Michigan

SAGINAW, Mich.—So serious has the natural gas shortage become at Mount Pleasant that all sales of gas equipment have been suspended by the Gas Corp. of Michigan, which, according to its vice president, Warren Somerville, can see no immediate remedy. The company has cancelled, effective October 1, its contract to supply gas for Central State Teachers College, and similar action confronts other big customers, including industries, hotels and banks. Mr. Somerville announces homes will be the last to be cut off as the supply dwindles. About 76 per cent of all Mount Pleasant homes are heated with natural gas.

W. A. Thomas, Mount Pleasant geologist and a member of a committee appointed by Lieut.-Gov. Leo J. Nowicki to inquire into Michigan's natural gas reserves, asserts the Mount Pleasant situation appears "critical." He says the Vernon and Clare fields might be able to furnish a limited supply of natural gas for about two years, but this would not enable the company to meet the winter's peak requirements.

Michigan Gas Development Is Sharply Criticized

SAGINAW, Mich.—Michigan's waste of its oil and gas resources, particularly its natural gas, came in for sharp criticism before a statewide group of municipal officials, gathered here for the annual convention of the Michigan Municipal League. The critic was C. A. Winder, an engineer of the Michigan Public Utilities Commission, who deplored the apparent inability of gas producers and gas consumers to get together.

"Michigan is sitting on top of an enormous supply of natural gas and oil, but we are face to face with the problem of bringing the producer and his market together," said Mr. Winder. "The problem has two phases—we must have willingness on the part of utility companies to undertake the distribution of the gas, and must determine whether the reserve supply of gas is sufficient to make financially feasible the construction of pipe lines.

"Only six-tenths of 1 per cent of the present open gas flow in Michigan is moving from well to market. The market exists; the supply exists. It is a question of getting the two together. There will be no further development of gas areas in Michigan if there is no market available. The important thing is to regulate the business so it encourages future development. It seems almost criminal we in Michigan should expend millions of our dollars for gas from outside the state."

On the question of gas waste, Mr. Winder said: "As things now stand in Michigan, millions of feet of gas are being wasted. Enough gas is wasted in this state to supply all the state outside of Detroit, and yet available figures indicate the state's gas supply is not sufficient for statewide use."

Dallas Gas Co. Taxes Increase 15 Per Cent Within a Year

DALLAS, Tex.—Expenditures for taxes by Dallas Gas Co. for the first eight months of 1937 were 15 per cent above the same period last year. For the eight months the company's gross revenue was $2,197,817.40, an increase of 5½ per cent. Operating expenses, including a reserve appropriation, were $1,711,547.70, an increase of 8 per cent.

The report showed expenditures for taxes in August were 18 per cent more than they were for the same month last year.

Pipe Line Activity

Plans for 200-mile 20-inch Gas Line Across Kansas

The Kansas Industrial Gas Co. is reported planning a 200-mile 20-inch line from the Otis field, Kansas, into western Missouri. It is designed to supply industries in eastern Kansas and adjacent Missouri districts. The company is now being organized.

Progress of Construction On Oil and Gas Lines

Williams Brothers, Inc., Tulsa, report the Duval Pipe Line Co. 6-inch 65-mile long oil line from Duval County to Corpus Christi, Texas terminal is about completed and oil will soon be turned into the system.

Work on the Standard of Louisiana 6-, 8- and 10-inch oil line from Roanoke, to Baton Rouge, La., is progressing rapidly and several crews are at work along the right of way. This job was started by Williams Brothers about a month ago.

In Wyoming the same company is taking up about 35 miles of 14-inch gas line for the Northern Utilities Corp. and reconditioning and relaying the same pipe in another ditch a few miles north of the old right of way. This line will secure gas from a different source than that from which the gas for the original line was taken. The line terminates in Casper, Wyo.

In West Virginia the United Fuel Gas Co. is laying a 16- and 20-inch gas line about 95 miles and starts at Cedarville, W. Va., and runs north to a point just south of Pennsylvania-West Virginia border where the line terminates in the Majorville, W. Va., station. This work is being done by Williams Brothers, Inc., and is progressing very satisfactorily.

Evangeline Line Project May Aid Producers in That Field

HOUSTON, Tex.—Producers in the Evangeline field, Louisiana, believe they will have an outlet for their 12,000 bbls. daily prorated production through the recently completed Continental line and another reported being planned, although Gulf Refining Co. will cease purchasing Evangeline high-gravity crude October 1. It will continue to purchase low-gravity oil from its field connections.

Distribution manifold, with eight lines, 5 inches in diameter, each connected to 8-inch line

Dedication of Petroleum Experiment Station at Bartlesville, Oct. 19-20

The new building of the Petroleum Experiment Station of the United States Bureau of Mines at Bartlesville, Okla., will be dedicated on October 19 and 20. The Bartlesville Chamber of Commerce is cooperating in an extensive program to mark the dedication as a memorable occasion. The governors and the congressional delegation of Oklahoma and oil-producing states in the Mid-Continent area have been invited to attend the ceremonies, as well as other prominent government officials and well-known figures in the petroleum and natural gas industries. Details of the program have not been completed.

The Bureau of Mines, as it relates to the oil and gas industry, is a research organization whose function is to provide answers to the many technical and economic questions arising continually in the industry. Its staff of specialists has access to data not available generally to the competitive units within the industry, and consequently the bureau is especially prepared to analyze technical problems in which economic considerations are important factors.

The Petroleum Experiment Station at Bartlesville was founded in 1917, and since that time several hundred reports dealing with all branches of the petroleum and natural gas industries have been published by the bureau. These reports include studies of the problems involved in drilling and production, transportation, refining and chemistry, and the use of oil and gas and their products. Particular emphasis is laid on reduction of waste, on safety and efficiency, and on economic development.

The new building, completed early this year, contains the administrative offices, library, and chemical laboratories of the station. The central part of the building is 100 feet long and 50 feet wide, three stories high with a basement. This part of the building is flanked by two wings, each 57 feet long and 37 feet wide, consisting of two stories and basement. The first floor contains the offices and the station library. The upper floors are used for laboratories.

The laboratories are well designed and equipped for distillation of petroleum and for physical and chemical determinations on oils, gases, and oil field waters. Construction and equipment have been provided in accordance with best modern practice so that accurate work may be done with maximum efficiency. In design and equipment the laboratories compare favorably with the research laboratories of colleges and universities and progressive oil companies.

The library has 5,000 volumes devoted to petroleum, natural gas, helium, oil shale, and allied substances, and dealing with their geology, development and production, chemistry and refining, and economics. Visitors who wish to use the facilities of technical references are welcome in the library reading room.

East Texas Situation Acute As Clashing Opinions Continue

With several factions maintaining diametrically opposite views on what should be done to remedy the production rate for the East Texas field it seems some definite action will have to be taken by the Texas Railroad Commission. Governor Allred has called a special session of the legislature but as it will deal only with revenue raising it cannot consider changes in the marginal well law which has been suggested as one way to remedy the high rate of production unless the governor instructs the legislature to take up this problem.

The operators in the East Texas field are becoming alarmed at the rapid drop in formation pressure which has followed excessive withdrawal of fluid. The October order allows a daily production of 480,154 bbls., or an increase of over 10,000 bbls. daily above the September allowable. This volume is much higher than engineers have estimated can safely be withdrawn if pressure is to be conserved, and many operators fail to realize that in addition there is from 50,000 to 75,000 bbls. of water being produced every day with the oil.

It has been estimated the total volume of oil and water that can be safely withdrawn from the East Texas producing formation under control pressure drop is about 375,000 bbls. daily. At the present rate of production of water and oil the field is actually withdrawing fluid at about 40 to 50 per cent higher rate than it should be.

Wells that are actually unable to produce any oil or to produce only a portion of the 20 bbls. marginal well allowable are still carried as active wells and given an allowable. This phase is being checked by the engineers for the railroad commission and it is possible a large number of wells will be taken from the allowable schedule, or will be figured into the total at the actual production rate they are able to make, or less than 20 bbls. per day.

One suggestion is to shut down the whole field for a time so the formation pressure may build up through the natural repressuring. On former occasions shutdowns have demonstrated the possibility of increasing formation pressure by this method. But if the field should be shut down now it is also probable salt water will move into many low-pressure areas and increase that problem. The basic trouble is too many wells. Reasonable spacing was impossible if surface rights of owners was to be protected but in the long run the state is going to lose the revenue upon millions of barrels of unrecoverable oil and the owners of property lose their royalties.

Much could be done if zones of pressure were established and the engineers allowed to make recommendations of rates of withdrawal for each zone in accordance with actual known conditions. Here the federal court steps in imposing consideration of the well's ability to produce and even in a zone of equal pressures some wells will have higher potentials than others due to sand characteristics.

OBITUARIES

FRANCIS R. McDERMOTT, 52, of Bolivar, N. Y., a producer in the Allegany field, died on September 19, after a three weeks' illness.

EDGAR N. DEGROFF, Tulsa, Oklahoma and Texas oil man, died September 22. He moved from Springfield, Mo., to Haskell, where he operated the Southern refinery. He later moved to El Paso, Tex.

EDWARD EVERETT ABRAMS, 82, old-time Pennsylvania operator, died September 22 in Butler, Pa. John M. Abrams of Los Angeles, a California producer, and R. H. Abrams of Phillips Drilling Co. of Midland, Tex., are sons. Mr. Abrams was a pioneer operator in the Bradford field.

B. W. SAVAGE, 50, oil operator of Ardmore, Okla., died at Mineral Wells, Tex., September 23.

MILLER SHEFFIELD, Cushing, Okla., representative of Axelson Manufacturing Co., died September 18 as the result of an accidental fall in Perry, Okla.

PROF. H. C. GEORGE, 56, head of the Petroleum Engineering School in the University of Pittsburgh, died last week in Pittsburgh. Professor George, known nationally in the oil and mining industry, was formerly director of the School of Petroleum Engineering in the University of Oklahoma, and before that was a consulting engineer in the U. S. Bureau of Mines.

FLOYD E. THURMAN, 59, retired oil man, died at Nowata, Okla., September 26. He formerly was with Standard Oil Co. and Phillips Petroleum Co.

J. F. McMURRAY, 53, a veteran of 36 years' service with Ohio Oil Co., died recently at his home in the Dry Creek field, Carbon County, Montana, where he was superintendent. He was a native of Van Buren, Ohio.

THE MARKETS*

CRUDE OIL: *Production in the United States declined only 8,905 bbls. per day in the past week. Oklahoma production decreased, but Texas producers increased their output to more than offset the Oklahoma decline, and this situation prevailed in other areas.*

REFINERY: *Tankcar gasoline markets are somewhat improved on the East Coast, weaker on the Gulf Coast and unchanged in Middle West. Natural gasolines and burning oils feeling effects of heavy demand accompanying cool weather in northern sections. Bright stocks weaker in Pennsylvania; prices lowered in Mid-Continent to meet Eastern reduction.*

TANK-WAGON AND SERVICE STATION: *Price cutting continues on Atlantic Seaboard with markets in Middle West somewhat spotty. Posted dealer schedules generally unchanged.*

FINANCIAL: *Oil stocks continued to decline. Average of 30 representative stocks for week ending September 25: High 35.51, low 32.04, close 32.40. Week ending September 18: High 37.31, low 34.19, close 35.20.*

**Details in Market Section.*

Great Increase in Oil Heating Foreseen by President Farish

"While oil prices are still lagging well behind the general advance in commodities which has taken place since the beginning of recovery," President W. S. Farish of the Standard Oil Co. (N. J.) believes "the industry as a whole is making money. Prices of both crude and products are a little higher than they were last year. The demand for bunker fuel oil has been good.

"In the United States alone, I expect to see 1,625,000 homes and commercial buildings heated by petroleum by the end of this year. The rapid development of apartment houses which are in most cases heated by fuel oil, should represent a great increase in consumption.

"We estimate that production outside the United States this year will show an increase of about 175,000 bbls. in daily average. For the whole world the increase promises to be 675,000 bbls. daily. For the first time in history, world production will undoubtedly exceed 2,000,000,000 bbls. of which 760,000,000 bbls. will come from fields outside the United States. To date, Venezuela has shown an increase of 22,000 bbls., Netherlands East Indies 18,000 bbls., Bahrein Island 15,000 bbls., and Russia 12,500 bbls. On the other side of the picture is Rumania where production has decreased by 25,000 bbls. a day."

Louisiana Allowable Raised, Lisbon Getting Largest Gain

NEW ORLEANS, La.—The State Conservation Department announced oil proration for October was fixed at 266,700 bbls. daily compared with 265,495 bbls. for September, an increase of 1,245 bbls.

The principal increase will be in North Louisiana, where production this month was fixed at 85,250 bbls. daily, while next month's allowable will be 87,500 bbls. The biggest increase is in the Lisbon field which may produce 15,000 bbls. compared with 12,750 bbls.

Allowables in Oklahoma

Chief Conservation Officer William J. Armstrong recommended to the Corporation Commission that Oklahoma production be maintained at 600,000 bbls. a day during October. Stanolind Crude Oil Purchasing Co., recommended that production be cut to 575,000 bbls. a day. Some revisions were suggested in the rules in Fitts. C. B. Peters asked for an increase in the South Burbank field.

New Mexico Crude Oil Allowable

New Mexico fell into line with other major oil producing states by reducing daily allowable production for October to 104,000 bbls., which is 2,400 bbls. less than the Bureau of Mines recommendation and 10,500 bbls. less than the allowable for September.

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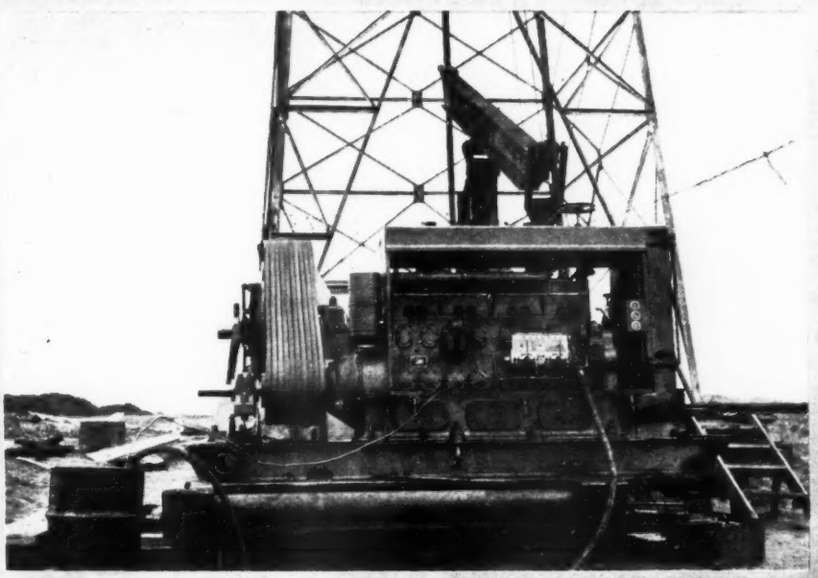
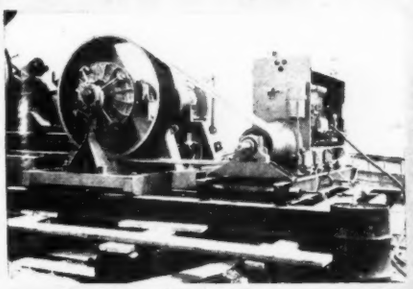
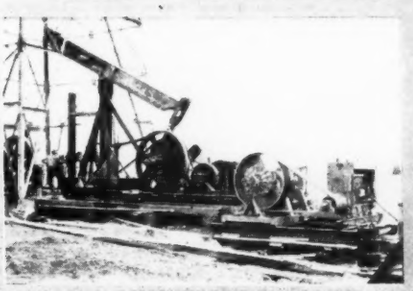
Operators in West Texas, Kansas, New Mexico and other cable tool fields are saving from fifty to eighty five per cent of their former fuel costs with Superior Diesel Drilling Units. All this with no sacrifice in drilling efficiency, as a practical operating range of 500 to 1600 RPM, gives speed, flexibility and a drilling motion like steam.

Available in Six and Eight Cylinder Models (4½" x 5¾" bore and stroke) and convertible to gas.







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Oil News from Foreign Lands

Italy's Embargo on Imports

The Italian government has recently issued a decree placing a virtual embargo on all imports of finished oil products for the remainder of 1937, according to the "Petroleum Press Service." Receipts of foreign oil during the coming months will therefore consist almost entirely of crude oil and semifinished products to be refined in domestic plants. Italy for some time past has been encouraging the expansion of domestic refineries. During the first half of 1937 these refineries produced approximately 2,394,875 bbls. of finished products, a daily average of 13,225 bbls. During the same period imports aggregated 6,568,000 bbls., or a daily average of 36,291 bbls. No restrictions are to be imposed on the importation of crude petroleum.

Colombia and Peru Production

International Petroleum Co., Ltd., produced 2,838,897 bbls. of crude oil in Colombia and Peru, South America, in August, a daily average of 91,577 bbls. For the first eight months of 1937, the company produced 23,113,252 bbls. in the two countries, a daily average of 95,072 bbls. In August, 1936, the company's output was 2,889,690 bbls., or 93,216 bbls. daily and in the first eight months of 1936 aggregated 22,341,908 bbls., a daily average of 91,565 bbls.

International Petroleum Co., Ltd., is the only company in Colombia reporting marketed production, so that the figures above represent the output of the entire country. In Peru, the production of Lobitos Oilfields, Ltd., and F. G. Piaggio Soc., Ltda., usually representing about 250,000 bbls. per month, is not available for August. Production of Lobitos for July amounted to approximately 213,640 bbls.

Dutch East Indies Exports

Exports of oil from the Dutch East Indies for the first four months of 1937 totalled approximately 13,486,564 bbls., a daily average of 112,388 bbls., compared with 11,970,056 bbls., or 99,750 bbls. daily, in the corresponding period of 1936. The increase in this year's shipments over the previous year amounts to 1,516,508 bbls., or approximately 13 per cent. It is estimated the shipments of the Royal Dutch-Shell subsidiary accounted for approximately 70 per cent of the total, while those of Standard-Vacuum Oil Co. accounted for the remaining 30 per cent.

U.S.S.R. Exports Less

Petroleum exports from the U.S.S.R. during the first seven months of 1937 are approximately 30 per cent less than for the same period in 1936, giving further indication that the country is becoming a negligible factor in the world oil markets.

A report to the Bureau of Foreign and Domestic Commerce from the commercial attache's office at Istanbul, Turkey, reveals that U.S.S.R. petroleum exports through the Black Sea during the first seven months of 1937 totaled 1,106,907 long tons, compared to 1,601,898 for the same period in 1936. During July alone, U.S.S.R. petroleum exports dropped to 135,822 long tons, nearly 35 per cent below the July total in 1936, which was 208,267 tons. As in previous months this year, the bulk of U.S.S.R. petroleum exports in July consisted of heavy fuel oil and gasoline. Fuel oil shipments in July totaled 73,335 tons and gasoline accounted for 29,814 tons of the total. The remainder was divided 14,272 tons to lubricating oil and 18,401 tons to kerosene.

The following figures show the relationship between petroleum exports for July this year and last and for the seven months of the two years:

Products—	July		First 7 months	
	1936	1937	1936	1937
Lube oils	21,037	14,272	224,247	131,176
Fuel oils	85,315	73,335	753,736	556,217
Kerosene	25,622	18,401	194,564	128,848
Gasoline	76,293	29,814	423,059	288,666
Asphalt	.....	.....	5,684	.....
Paraffin	.....	.....	608	.....
Totals	208,267	135,822	1,601,898	1,104,907

Italy was the largest user of U.S.S.R. petroleum exports in July, having consumed a total of 38,424 long tons, while Denmark was second, receiving 23,521 long tons and Germany was third, taking 22,973 tons. Details of the traffic for the month follow:

County—	Fuel oil	Lube oils	Gasoline	Kerosene	Total
Belgium	11,272	7,025	.....	.....	18,297
Denmark	8,132	.....	15,389	.....	23,521
Estonia	1,519	.....	.....	3,291	4,810
France	2,355	.....	.....	.....	2,355
Germany	13,350	4,872	4,751	.....	22,973
Italy	36,083	2,341	.....	.....	38,424
Holland	.....	.....	.....	8,795	8,795
Palestine	.....	.....	.....	4,462	4,462
Spain	.....	.....	8,154	1,300	9,454
Turkey	624	34	1,520	553	2,731
Totals	73,335	14,272	29,814	18,401	135,822

Iraq Oil Production

The production of crude oil in Iraq during the year ended March 31, 1937, amounted to 28,447,000 bbls. Production was divided by companies as follows: Iraq Petroleum Co. 27,563,000 bbls., Khanaqin Oil Co. 745,000 bbls. and British Oil Development Co. 139,000 bbls.

Drilling in the Philippines

Drilling is under way on the Bondoc Peninsula in the Philippines by the Far Eastern Petroleum Co. The company is reported to have a concession covering some 97,000 acres.

Iranian Production

Iranian crude oil production set another all-time record during June totaling 879,000 tons, or about 6,636,450 bbls. for the month and a daily average of 221,215 bbls.

June production in Iran exceeded this year's previous peak of 838,000 tons in March by 41,000 tons, or 309,550 bbls. Compared to May, Iran crude oil production in June was 52,000 tons greater and was 156,000 tons higher than registered in the same month of 1936. For the first six months of 1937, Iran crude production totals 4,749,000 tons, or 35,854,950 bbls. For the same period in 1936, the country accounted for production of 30,736,050 tons.

Additions to Anglo-Iranian Oil Co. refining facilities at Abadan during the latter part of 1936 and the first of this year coupled with greater demand in the company's marketing districts have made possible the increased rate of production.

Below is the production record by months for the first half of this year compared to the first six months of 1936:

(Figures in tons)

	1937	1936
January	750,000	661,000
February	631,000	640,000
March	838,000	663,000
April	824,000	616,000
May	827,000	768,000
June	879,000	723,000
Six months	4,749,000	4,071,000

New Concession in Guatemala

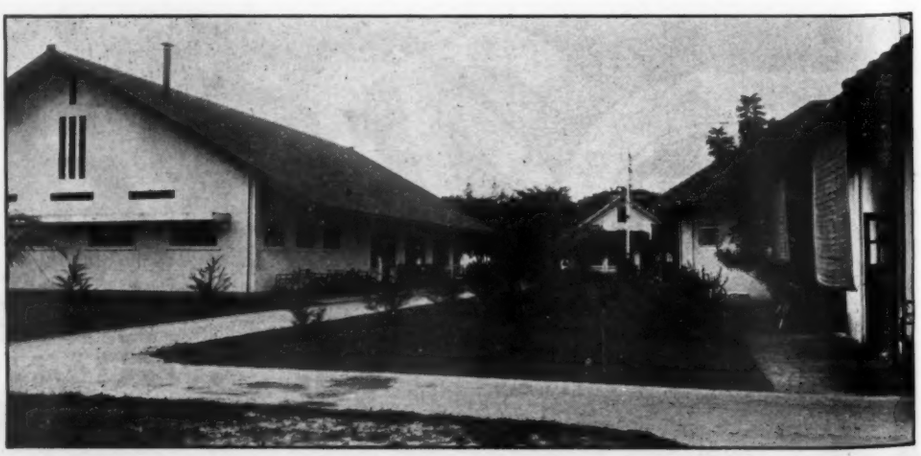
According to the Guatemalen Official Gazette, a concession for oil exploration embracing approximately 7,600,000 acres has been granted to the "Compania Guatemalteca de Petroleo Shell" dating as of July 7, 1937. The concession is divided into seven sections practically all in the district of Peten.

Oil Tankers for Norway

Two oil tankers of 14,500 tons deadweight capacity each are being built in British yards for Westfal-Larsen of Bergen, Norway. One is to be delivered in November, 1938, and is reported to have been chartered by a prominent Canadian oil company for a two-year period.

Czecho-Slovakian Production

Czecho-Slovakian production of crude petroleum in July, 1937, amounted to 11,788 bbls., compared with 11,067 bbls. in June and 12,369 bbls. in July, 1936. Natural gas output in July, 1937, showed a decrease of approximately 7 per cent compared with June and a gain of 11.9 per cent over the output for July a year ago, according to statistics furnished the Department of Commerce.



N.K.P.M.'s restaurant in the company's Palembang, Netherlands East Indies, headquarters

ENGINEERING AND OPERATING SECTION

Presenting modern developments in operation of producing properties, refineries and gasoline plants, and pipe lines, including petroleum research in the field and laboratory

This Week

REDUCING RIGGING-UP TIME THROUGH PROPER LAY-OUT AND UNITIZATION OF EQUIPMENT — By Mitchell Tucker ..... **Page 40**

Increasing attention is being given by oil companies to determine methods by which rigging-up time of heavy-duty rotaries may be reduced without sacrificing safety. Conditions governing the layout of the rig are discussed and many conveniences and efficiencies achieved by proper planning are pointed out.

SEISMIC DISTURBANCES INDUCED BY DEEP ROTARY DRILLING—By Harry F. Wright ..... **Page 42**

Following complaints of property damage caused by vibrations from drilling rigs, a series of tests was recently completed in the Oklahoma City field to determine the magnitude and radius of the vibrations. Method of testing and results of the tests are described.

THE WRONG WAY TO HANDLE SUCKER-RODS IN THE FIELD—By Paul Reed ..... **Page 46**

Showing both right and wrong methods of handling sucker-rods, a moving picture has been made which is of great assistance in studying causes of sucker-rod failures. Several shots taken from picture show mistakes commonly made in handling sucker-rods.

ILLUSTRATED OPERATING IDEAS ..... **Page 47**

Vacuum on wells during cleanout work as safety measure. Front exhaust on rod-and-tubing trucks. Automatic signal on pumping power. Strategically located sprays as protection against fire.

APPLYING COLLOIDAL CHEMISTRY TO WATER CONDITIONING—By L. Drew Betz ..... **Page 49**

The refiners' problem of conditioning water for boiler and cooling purposes may be greatly simplified by application of reactive colloids to remove various incrusting solids such as calcium and magnesium. Formation and properties of colloidal solutions, as applied to water conditioning, are discussed.

CORROSION OF METALS IN SOILS AS A FACTOR IN SELECTING MATERIAL FOR PIPE LINES — By Dr. Scott Ewing ..... **Page 51**

Research work in pipe line corrosion and in determining types of materials best suited to certain soil conditions has greatly prolonged the lives of lines. Conclusions drawn from results of corrosion tests are pointed out, and the effect of alloying elements on resistance to corrosion is discussed.

QUESTIONS ON TECHNOLOGY — By C. K. Francis, Ph. D. ..... **Page 61**

Stoddard solvent specifications revision effective February 10, 1938. Petroleum as nitrogen source for explosives and other compounds. Carbon monoxide for reducing sulfur in thiophene oils.

PROBLEMS FROM READERS—By L. G. E. Bignell **Page 63**

Pipe line costs in Canada. Valuation of settled production. Interpretation of clause in deed. First rotary drilling bit. Locating gas and oil in place.

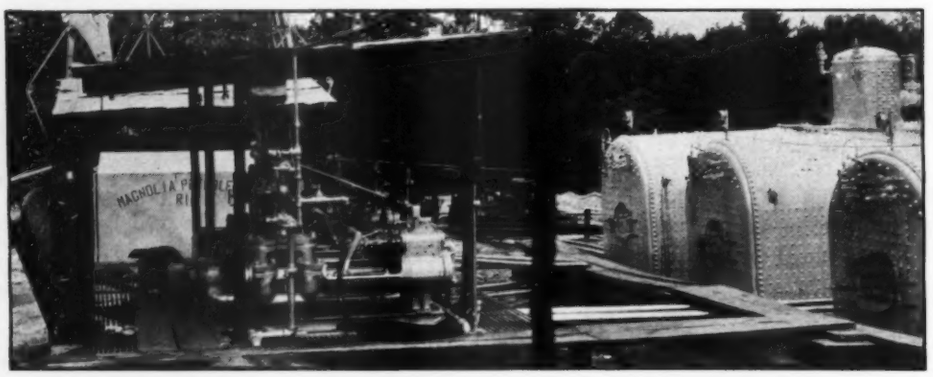
Reducing Rigging-Up Time

Layout and Unitization

Important advancements have continually been made over the past few years in the handling of rotary drilling equipment which have improved the efficiency of operation. Having achieved sueh results from those factors which offer greatest opportunities along this line, an increasing amount of attention is now being given to obtaining overall economies from proper layout and rigging up of heavy-duty rotaries. Close study and systematizing of this part of the drilling operation, with a view to safety, convenience and preservation of equipment, offers opportunities for further reductions in rigging-up time and overall drilling costs.

The five principal requirements in rigging up heavy-duty rotary drilling outfits are as follows:

1. All possible safety features in both moving and laying out new locations should be closely observed.



A very compact layout, with boilers, feed pumps, circulating pumps, and derrick all in close and convenient proximity. Pipe racks are just beyond the derrick

2. New locations should be laid out in such a way as to receive the maximum benefit and efficiency from all major rig items.

3. All other conditions permitting, locations should be laid out so that orderly and rapid "move on" and "move off" time can be achieved.

4. Drilling plants should be so arranged for maximum convenience, economy and accessibility while in operation.

5. They should also be arranged so as to result in the greatest preservation of equipment possible.

Local field and topographical conditions, of course, have an important part in determining the moving and rigging up of drilling machinery. Statutory requirements in the different states regarding safety measures also dictate to some extent the rig layout.

Safety Features

The most recent summary of accidents and their severity in the petroleum industry, compiled by the American Petroleum Institute, shows the frequency rate for the entire industry was 14.55 with a severity rate of 1.89 in 1936. During the same period, in the drilling division of the industry, frequence was 56.74 with a severity of 7.59, or about four times the rates exhibited by the entire industry.

A good portion of these accidents occurred while rigging up or tearing down. Another large share was directly caused while drilling, because of some improper work or laying out during the rigging-up procedure. Neglecting the personal element in the occurrence of accidents, probably all other accident causes can be traced to faulty laying out or rigging up of the drilling machinery. Undoubtedly, the moving, setting up, and tearing down of heavy equipment is one of the most dangerous operations in drilling. The unitizing of drawworks, pumps, engines, and other large pieces of the unit has greatly added to the facility and safety with which they can be handled.

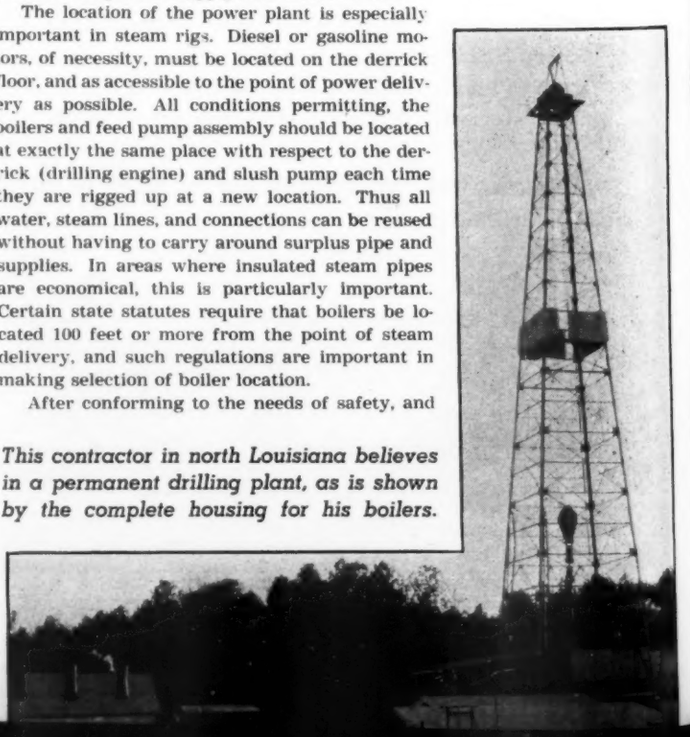
Wherever possible, this work should be done in daylight hours. Some contractors will not consider moving on or off during the night hours. Practically all electrical generating units for lighting the greater outfits operate from a steam drive of some kind. Boilers must be allowed to cool before moving, so the ordinary source of electric lights is not available. Too often accidents have occurred because this work was carried on by the aid of truck or automobile lights, or inadequate gas flares. Some rigs now include a small gasoline engine for auxiliary purposes, and can be used to operate the generating system after boilers are shut down. Other contractors or trucking companies are equipped with a power take-off from car or truck wheels for running a portable lighting unit. However, the great majority of contractors prefer to use all three drilling crews to tear down and rig up only during daylight hours.

If a further break down is made of drilling accidents, it is found that a large share of them occurs while going in or coming out of the hole with the drill stem, or when workmen are handling several units of heavy equipment almost simultaneously. Careful thought to derrick floor layout and arrangement of tongs might result in more safe and free working room under these operations. Balance weights for tongs should be safely supported and out of the way as much as possible. Where permissible, they should operate under the derrick floor, or on the outside of the derrick. The almost universal use of substructures on heavy-duty outfits has removed some of the greatest hazards in drilling—bringing out into the open all the equipment and work formerly done in the dangerous cellars.

Rigging up of the power plant and location of steam lines is, of course, all important. Boiler fittings should be of proper working pressure. Dangerous hot valves or pipes should be identified by some change in color. Some contractors coat all hot pipe with aluminum paint, and all other black for the purpose of distinction. Exposed hot lines, where necessary, should also be guarded. The fireman's bench should be so situated that he can read all water and steam-pressure gauges, and also where possible, should be in full view of the slush pump and the drilling operations. It goes without saying, of course, that steam exhaust or discharge pipes should be directed to some point where visitors or members of the crew have little occasion to go. The close observance of all other well-established safety measures around drilling rigs, too numerous to mention, are worth all the effort required to apply and enforce them.

The location of the power plant is especially important in steam rigs. Diesel or gasoline motors, of necessity, must be located on the derrick floor, and as accessible to the point of power delivery as possible. All conditions permitting, the boilers and feed pump assembly should be located at exactly the same place with respect to the derrick (drilling engine) and slush pump each time they are rigged up at a new location. Thus all water, steam lines, and connections can be reused without having to carry around surplus pipe and supplies. In areas where insulated steam pipes are economical, this is particularly important. Certain state statutes require that boilers be located 100 feet or more from the point of steam delivery, and such regulations are important in making selection of boiler location.

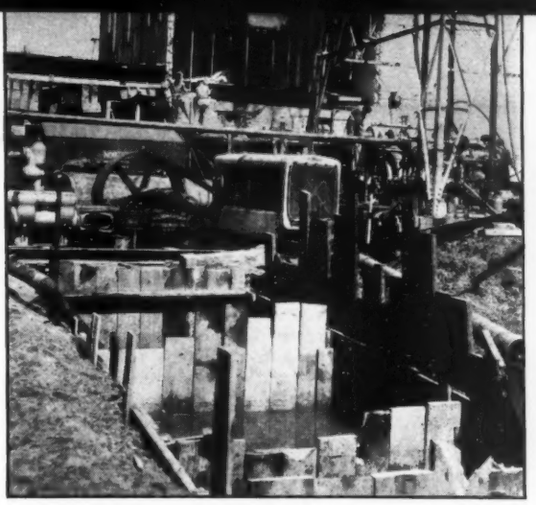
After conforming to the needs of safety, and



This contractor in north Louisiana believes in a permanent drilling plant, as is shown by the complete housing for his boilers.

Through Proper of Equipment

By MITCHELL TUCKER



Topographical conditions often control location of drilling machinery. This view shows a diesel rig on town lot in Kilgore, Tex. Note the improvised pits

statutory and topographical requirements, the steam plant is most properly located as close to the drilling engine and slush pumps as possible, in order that heat losses and consequent pressure drop will be minimized. Steam lines should be as "streamlined" as possible to discourage condensation of water in the lines. Where topographical or weather conditions are such that they encourage this condensation in the steam line, steam-scrubbers or separators are essential at the proper point in the line, preferably just before the steam is delivered to the point of consumption.

Location of Mud Pumps

Considerable difference of opinion exists as to the proper position of the slush pumps. In some localities where fuel costs is a minor item, the pumps can be located at the most advantageous place with regard to the derrick, without giving any regard to the steam generating plant; providing, of course, that the power plant is of sufficient capacity to deliver peak steam pressures regardless of the line loss from plant to pumps. In other localities, where fuel costs are high, it is highly desirable to have the slush-pump assembly located as near as practical to the power plant, as from 80 to 85 per cent of the entire steam delivered is consumed by the circulating plant. The power loss is greater through a long steam line to the pumps than would be the case in a discharge line of the same length.

Again topographical conditions often dictate the location of the mud pits, which in turn influence the location of the pumps. Some drillers prefer having the circulating pumps as close to the derrick floor as possible. Control levers are often located on the floor, which regulate the operation of the slush pumps through extension rods. In areas where flushing volumes must be very large, and the pumps are to be taxed near capacity, they should be located as near the hole as possible so that maximum volumes can be delivered at minimum pressures. Very little time is needed to make a decision regarding the location of slush pumps with respect to the working pit, as they should be as close as possible and in a direct line or path from the derrick floor steps and the pit itself. Much greater power loss is suffered in a long mud suction hose than in a long discharge line.

With respect to the steam generating plant and the pits, the mud pumps should still be immediately adjacent to the pits, as a much larger power loss would be suffered if the suction hose into the pit were extended than would be the case if the steam delivery line had to be extended the same distance. The extension of the suction hose might also affect flushing volumes or pressures, and under certain conditions have a very detrimental effect upon the overall efficiency of drilling. In areas where hot muds must be handled, pit locations must be determined in the full light of this fact.

Orderly "Move On" and "Move Off"

As the hole nears completion, and new location is selected, plans can be laid for moving off and moving on. Generally, layout is decided upon, derrick and pipe racks built, and pits dug before the final completion of the previous well. The steam generating plant and slush pumps are the first units to be shut down at the completed well, and are therefore the first to be moved. Ingoing fuel and water lines are laid. Steam plant and circulating pumps are assembled by one crew (made up out of the three drilling crews) while the other men are engaged in rigging up derrick machinery.

When the essential items are in operating shape, and boilers fired, the surface hole can be dug and pipe set, before the entire rig construction is completed. During the shutdown time for surface-pipe cement to set, all details of construction can be finished, and the rig given a thorough cleaning before drilling is resumed.

Time and money can always be saved by properly locating the drill pipe and casing rack with respect to inroads to the locations, and with respect to the open side of the derrick. Care should be paid in locating casing rack so that men can work on both sides of it in making pressure tests and measuring joint lengths, and the other work preparatory to actual running of pipe. Where one of the crew is charged with watching mud weights and viscosities, and grabbing samples, a saving in time and convenience is always realized by locating mud screens and discharge pipe at the most accessible point.

The hanging of the rotary hose is important. In the first place it should be situated so that the lowest number of connections or turns are necessary from the pump discharge to the hose receiving-end, to afford the most perfect streamlining possible, and allow the delivery of desired volumes at lowest pressures. The hose is always hung in that corner of the derrick away from the point where pipe will be stacked, or where it will not be damaged.

Enclosure for Drilling Engine

At least a weather-proof cover, if not an enclosure, for the drilling engine is now standard on most heavy-duty rigs. A dry place for workmen's clothes, for lubricants and for small supplies is thus provided, together with obvious advantages to the driving power, regardless of its type. If gasoline engines are being used for drilling, any enclosure provided should not interfere with the engine's cooling system.

The many conveniences and efficiencies which may be achieved by careful arrangement of the rig floor are too numerous to mention, and must vary with different types of rigs and with different personal wishes of the drillers themselves. A few such important items are: The bit weight, torque and pump-pressure gauge should be in full and direct view of both the driller and the floor man in control of slush pumps; tongs and their counterweights can be hung so that when in use they are at the most advantageous position, and when out of use they are entirely out of the way; small tools, chain tongs, etc., should have a clean, systematic, and accessible location.

In the moving of equipment, greater care must be exercised in handling boilers than any other pieces of the outfit. The complete unitization of other drilling machinery on skids has facilitated its movement and prevented damage during transfer. Well-known cautions in the movement of drill pipe will pay dividends in longer life. The boilers themselves constitute one of the most expensive pieces of a steam rig. Their cooling, cleaning, and moving is a very important factor in determining their length of useful life. Extreme care must be exercised in loading the boilers on trucks or trailers. No pull should be placed around the dome or steam outlets, and the use of hooks in holes or doors should never be permitted. They should be swung and moved under practically no tension to prevent any distortion of tubes, seams, or plates. Substantial savings are offered to any contractor who gives a close study to the movement of his boilers from location to location.

A convenient layout, showing working pit, circulating pumps, mud-testing and sampling point, all within close reach of men on derrick

Seismic Disturbances Induced by Deep Rotary Drilling

By HARRY F. WRIGHT
Consulting Geologist and Engineer, Tulsa

The drilling of oil wells on developed town lot areas has caused in many instances claims against the operating companies for damages to residences and other buildings caused by vibrations from the drilling rigs. In the North Oklahoma City area, where the type of construction and value of residential property is above the average, such complaints have been particularly numerous.

With the idea of determining the magnitude of vibrations from drilling rigs and their effective radius of influence a series of tests have recently been conducted. These tests were undertaken upon the theory that there would be present certain vibrations due to ordinary traffic conditions within the city which would represent a more or less constant minimum for areas subjected to substantially the same traffic influences; that in the immediate vicinity of drilling rigs there would be excesses above this minimum which could be directly charged to drilling operations; and that these excesses would diminish with distance from the well until substantially the minimum would be reached. The object of the tests was to determine the relative magnitude of the excess disturbances caused by drilling and the distance from the source to which they might be traced.

The instrument used in making the tests was the geophone in common use in seismographic work. Instead of the usual recording apparatus which is tuned to exclude violent shocks, there was substituted a newly-designed mechanism which indicates all shocks of whatever magnitude and permits reading the intensity of the induced electric current from the dial of a voltmeter. The voltages are not self-recording but must be noted on the dial as the shocks occur. Relatively uniform and sustained vibrations result in a wavering motion of the indicating needle from which the maximum intensity of the shocks readily may be noted. The sudden shocks result in violent kicks of the needle.

The shocks to which a given building is subjected are of two kinds, viz., those transmitted through the ground as miniature earthquakes and those transmitted through the air. The latter are due both to mass movement of the air itself (as the wind blowing), and to those transmitted as air-waves as sound or sudden concussions are radiated through a quiet atmosphere. A geophone placed upon the foundation or concrete floor registers the ground waves. When set upon a window ledge it indicates both the ground vibrations, and those shocks received through the atmosphere which impinge directly upon the walls.

The earth shocks and the air shocks are quite different in character. When transmitted through solid material such as rock the shocks have a short wave length (low amplitude) and are repeated very rapidly (high frequency). Those transmitted through the air or soft ground, due to elasticity of the material have a long wave length and are repeated relatively slowly (high amplitude and low frequency).

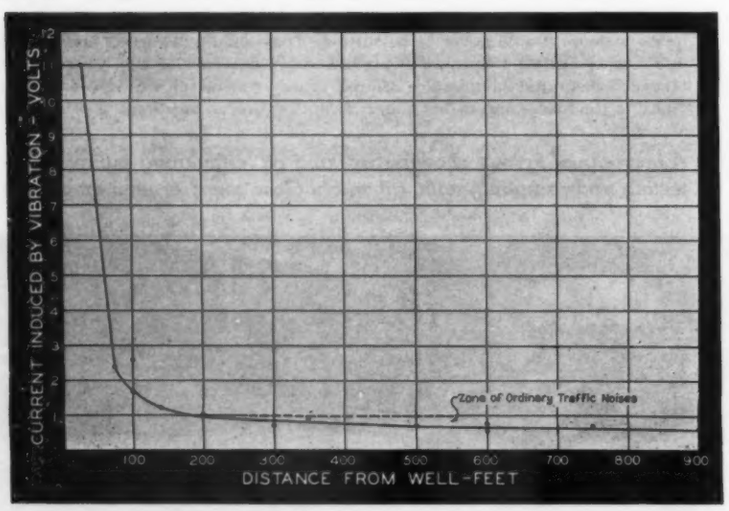


Fig. 1—Seismic disturbance caused by steam rotary rig (drilling normally at 2,200 feet) operating in the Oklahoma City field

There are at least three sources of vibrations at a drilling well, viz: (1) The rotating tools grinding upon solid earth or rock; (2) the vibrations of surface machinery and pumps; and (3) the pulsation of boilers fired under a heavy load. The first two are probably entirely earth waves. The third, particularly if the boilers are "bucking" more or less violently due to uneven or over- or under-firing are primarily concussions carried through the air.

A comparison of relative intensity of earth vibrations at points far removed from the drilling area with those at a drilling well are extremely interesting. A geophone placed just inside the curb at a busy street intersection far away from any drilling well, and with no traffic at all at the precise moment the reading was noted showed a disturbance in the magnitude of .55. This, incidentally, was practically the minimum recorded at any of the 60-odd stations surveyed. With passenger cars moving through the intersection the disturbance increased 2.0-2.5. A heavy truck rumbling along at city speed promptly moved the indicator up to 5.0. When the geophone was moved back from the curb some 60 feet from one street, and 75 from the other, the no-traffic reading was approximately the same as before, .50; but the movement of light passenger cars recorded only .8 as against a 2.0 directly at the curb. At a similarly located station diagonally across the block away from the first one, normal traffic at the busy corner and none immediately at the station gave a reading of 1.0. With the geophone just inside the curb and a trolley passing in the middle of the street, the disturbance was 2.5 along a well-repaired right of way, and 13.0 on a rough one.

On the wooden floor of a kitchen an electric refrigerator induced vibrations of a magnitude of 2.2. With the refrigerator cut off the disturbance promptly dropped to 1.0. In the center of a quiet little park one square block or so in area, and with no traffic at all moving anywhere in sight, the needle rested steadily at 1.0.

The normal life of a metropolitan city induced earth vibrations of .5 to 1.0 at geophone stations when entirely unaffected by local traffic, and showed disturbances up to 13.0 caused by the normal movement of heavy traffic past the station.

As compared to these disturbances induced by normal traffic conditions, surveys were made immediately at, and at successively greater distances

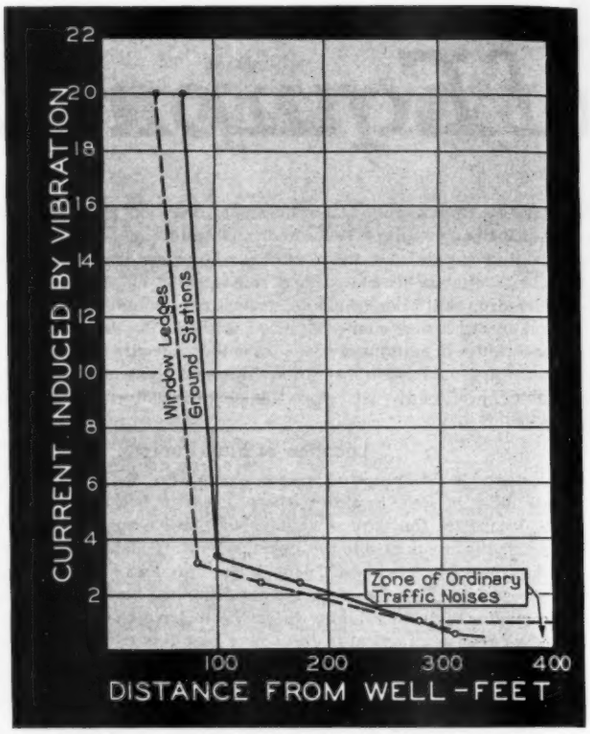


Fig. 2—Seismic disturbance caused by electric rotary rig (drilling normally at 2,200 feet)

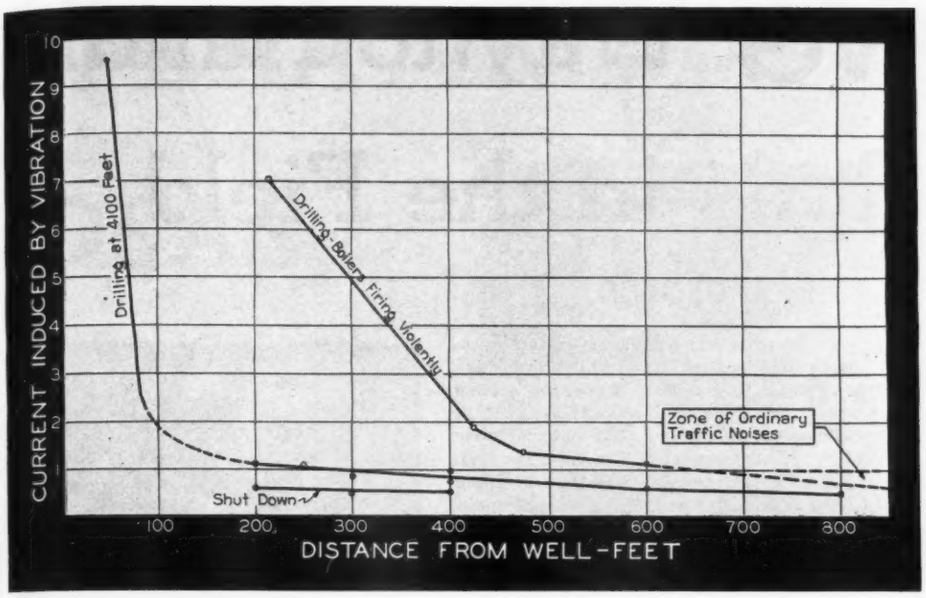


Fig. 3—Seismic disturbances caused by steam rotary rig. "Shut down" and "drilling at 4,100 feet" were taken with the geophone on the ground; "drilling boilers firing violently," with the geophone on a window ledge

from, three drilling wells in the residential district. Two of these were steam-powered, the third electric. The accompanying charts show graphically the magnitude of the shocks induced by drilling operations and the distances from the source through which they are significantly greater than those of normal city life.

Figure 1 shows intensities of vibrations around a steam rig drilling normally at 2,200 feet. Stations were occupied in all four directions from this well at distances up to 800 feet. Distances are approximate. The platted points are picked indiscriminately as they happened to occur in any of the four directions surveyed. Stations were selected, with only one or two exceptions, on concrete porch floors of neighboring residences. It is evident from this chart that at distances greater than 200 to 300 feet away from the well vibrations occasioned by this steam drilling rig were not above those induced by normal city life. Comparison of this chart with Curve B on Figure 3 shows that a second steam rig located some six blocks away produced substantially the same result.

Figure 2 shows comparison between ground and window-ledge shocks in the vicinity of an electrically-powered rig drilling normally at 4,500 feet. Ground vibrations were not noticably greater than those of ordinary city life at distances above 100 feet.

Perhaps due to the more synchronous motion of surface equipment and continuous even-speed operation over relatively longer periods, the shocks sustained by buildings are greater adjacent to electric power, but they appear to die out at about the same rate and to be effective at no greater distances.

Figure 3 is a comparison of shocks surrounding a steam drilling outfit under three different conditions, viz.: (A) Drilling suspended and machinery quiet; (B) drilling normally at 4,100 feet; and (C) drilling, but with boilers over-fired and vibrating violently. The same identical ground stations were occupied for (A) and (B). Since the action of the boilers created air waves readily felt in the ears at close range, stations for (C) were selected on window ledges of buildings. The closest structure was 215 feet and the next 425 feet away from the boilers. At 600 feet these violent air waves were reduced to substantially no excess above the ordinary disturbances.

While there is considerable approximation in these tests, and while it is probable that some stations, particularly those on window ledges, were affected by extraneous noises not discernible by the operators (such as electric refrigerators in operation, and people moving about in the houses); they do show conclusively two things. The first is that even the most severe shocks occasioned by deep rotary drilling operations are little if any more severe than vibrations caused by trucks and street cars passing along a city street. The second is that these shocks die out very rapidly with distance from the source and it very doubtful whether, except in the occasional cases of severe shock, they are felt at all at distances greater than 200 to 300 feet from the well.

Doctor Egloff Writes New Book on Reactions of Hydrocarbons

"The Reactions of Pure Hydrocarbons," by Gustav Egloff. A. C. S. Monograph No. 73, page 897. Price, $16.75.

This reviewer first knew Doctor Egloff when he was at Columbia University, shortly to join a company interested in a process for the cracking of petroleum. What were to be the developments in the thermal treatment of oil could not be predicted. The chemists had been taught that the carbon compounds of coal tar offered a fertile field for the synthetical preparation of useful compounds but the hydrocarbons of oil were quite stable, resisting efforts to decompose them so tenaciously that, until very recently, but little was known regarding their chemical possibilities. The author has had during the past 20 years, many reasons to study the reactions of the hydrocarbon groups which he discusses under thermal, catalytic, photochemical or electrical treatment.

The information presented in this book is confined to the paraffins, olefins, acetylenes, aromatics, cycloparaffins and cycloolefins, and terpenes. There are seven chapters, each of which is extensive enough to make a book itself. The thoroughness of the treatment may be indicated to a very small degree, by noting the Paraffin Hydrocarbons, Chapter 2, requires 233 pages with 381 references. Each subject is very well covered in language so clear that to one consulting the book it is both an inspiration and pleasure.

The work that is being done today within the field of the syntheses of the hydrocarbons, as a direct result of thermal treatment of petroleum fractions, promises to rival in industrial importance the research of coal tar that has produced so many compounds useful to man. "Almost unbelievable quantities of hydrocarbons are naturally available all over the world, appearing as gases, liquids and solids and forming the basis of many of the largest industries. The natural gas and manufactured gas industries handle billions of cubic feet of gaseous hydrocarbons daily, while the petroleum industry is guardian over fabulous volumes of gases, oils, waxes and asphalts." The unsaturated hydrocarbons of refinery gases, wasted a few years ago, are especially valued for the preparation of synthetic organic chemicals. Enormous quantities of these are being made available through the development of cracking and polymerization. The information that the author presents on this subject alone constitutes a valuable contribution.

This book is a library in itself, containing the substance of contributions so widely scattered in the literature it will serve the petroleum industry and every student of the behavior of the hydrocarbons as a valued medium for advancing our knowledge of petroleum and its products. The seriousness with which the author has considered details is suggested by the subject index, which requires 45 pages of, double columns, agate type. Everybody having an interest within the field of research, or a knowledge, of the hydrocarbons of petroleum will value a copy of this book.—*C. K. F.*

"The Reactions of Pure Hydrocarbons" may be purchased through the Book Department of The Oil and Gas Journal at the regular established price of $16.75, express prepaid (postage extra outside the United States). A copy will be forwarded upon receipt of check or money order for that sum Where no payment accompanies the order, the book will be sent express c.o.d. to avoid delay.

S.A.E. New York Meeting

Boake Carter, news commentator, will be the featured speaker at the annual dinner of the Society of Automotive Engineers, October 28, at the Hotel Commodore, New York, John A. C. Warner, S.A.E. secretary and general manager, has announced.

W. J. Davidson, general sales manager of Winton Engine Corp., chairman of the engineering relations committee, will be toastmaster. President Harry T. Woolson is to preside at a short business meeting. Entertainment and music will be furnished by Phil Spitalny and his All-Girl Orchestra.

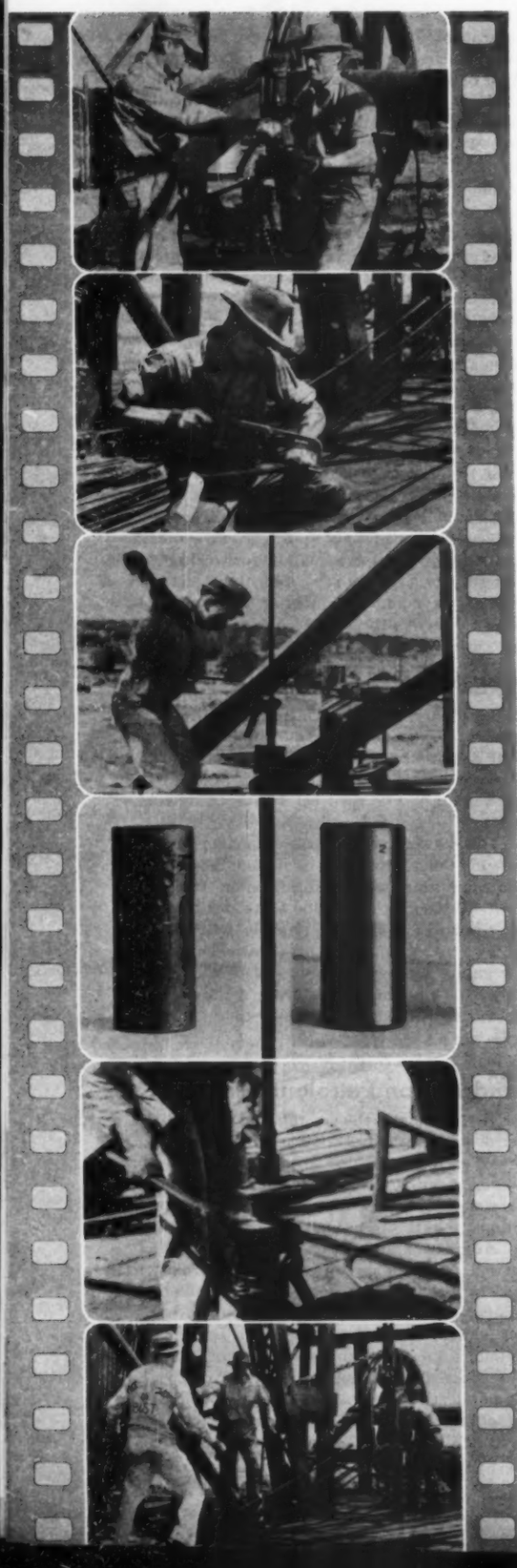
The annual dinner of the Society of Automotive Engineers is one of the industry's outstanding events during National Automobile Show week in New York.

Standards on Petroleum Products

The 1937 edition of the compilation of "A.S.T.M. Standards on Petroleum Products and Lubricants," sponsored each year by Committee D-2, includes in their latest form the 58 test methods which have been standardized, 7 specifications and two lists of definitions of terms relating to petroleum and to material for roads and pavements. Two proposed methods, approved for publication as information and for comment, cover unsulfonated residue of plant spray oils and dropping point of lubricating greases and the 1937 D-2 report which is included also details numerous changes in the standards and gives the revised diesel fuel oil classification. Copies of this publication, 390 pages, heavy paper cover, can be obtained from A.S.T.M. headquarters, 260 S. Broad St., Philadelphia, Pa.

The *WRONG* Way to Handle Sucker Rods in the Field

By PAUL REED



Superintendents, engineers and executives in charge of pumping operations in the production departments of major oil companies, have been making special efforts in recent years to study the causes of sucker-rod failures. In order to have a graphic summary of rod handling practices, a moving picture has been made, showing right and wrong methods of handling sucker-rods. Rod crews will find this of particular interest for the film presents not only improved methods but also the common mistakes and their consequences. In the making of this picture, use has been made of the results of investigations of the S. M. Jones Co. which have aimed to cover the full range of sucker-rod practices in the field. Selected pictures from the film are shown on this page.

Recommended practices are presented in the two shots appearing at the top of the left-hand column. The upper one shows the box washer used in removing dirt or foreign matter from the box end before running rods. Attention is called, in the second one from the top, to the advisability of cutting off a sample from a broken rod and sending it in to be analyzed. Producers are doing something more than just replacing broken rods or running a splicer; they are hunting for the causes of breaks.

All the other shots on the page emphasize the damage done through blunders. This part of the film centers around the adventures of Rodney, who crashes into this Oklahoma movie while hitch-hiking to Hollywood. He has a winning personality but he makes all the mistakes that can come as the result of carelessness and good intentions.

Etching Shows Damage

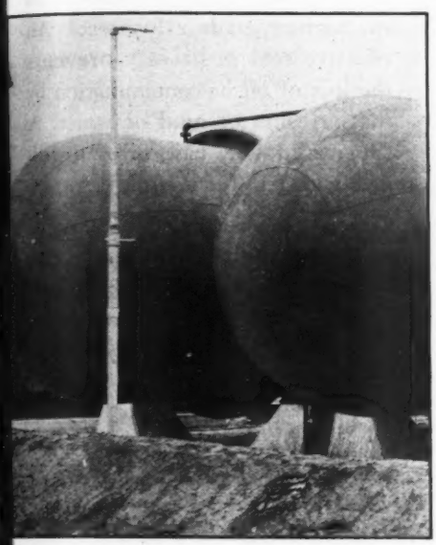
Rodney socks the joints to loosen them and does the damage shown by the hot-etched coupling shown in the next picture where it is compared with a perfect coupling. In the following view the clutchman is seen taking his 36-inch wrenches to show Rodney that it is easy when you do it right. Next Rodney is seen rushing to be helpful but he does everything wrong while trying to be a success in the rod crew. He walks up the rods and only the alertness of the clutchman can keep him from damaging them in a way that is likely to lead to a break.

At the top of the right-hand column, a demonstration is given to Rodney to show how easily the unscrewing of thread protectors can be done when it is started with a wrench and finished by hand; this is to discourage him from using a hatchet. As an expert stabber, Rodney does some fine cross threading, making it necessary for the clutchman to come to the rescue with thread chasers. Rodney is worst at making up a tight joint that will not unscrew or cause a pin break. He takes a toy wrench, because his wrists are weak, instead of a man-sized wrench. If they let him go on there would be pin breaks. The clutchman shows him the right way and demonstrates by making a chalk mark. When he gets through with his 36-inch wrenches the marks will be about one-fourth inch apart showing that just making up the thread does not mean a tight joint.

The remainder of the film is constructed along the same lines to help create a better understanding of the progress made and the opportunities available for lowering lifting costs by means of getting better results with sucker-rods which have been designed for this service.

OPERATING IDEAS

Protection Against Fire



In a large California natural gasoline plant spray nozzles have been placed at strategic points for the protection of equipment should a fire develop. The spray nozzles are supplied with high-pressure water and the control valves are installed at a safe distance from the nozzles. The lines and nozzles have sufficient capacity to blanket the local area and as a result, air does not reach the fire zone.

Automatic Signal on Pumping Power

An oil company operating a pumping power in the Bebee field, near Ada, Okla., has the knock-off blocks of each rod line wired so that in case a rod breaks or the blocks become unhooked, the pulleys of the blocks are caused to come in contact with two wires which completes the circuit and rings a siren at the production office. A mercoid switch is also included in the circuit, automatically cutting off the ignition to the engine and shutting down the power. This operates in conjunction with a thermostat that shuts down the engine in case of over-heating. Another cut-off switch is placed on the lubricating oil line, and if the oil stops flowing it also cuts off the ignition. These switches allow the power to operate without danger of tearing up the equipment or injuring the engine in the absence of the operator and make for safer operation.

Vacuum on Wells as a Safety Measure

Many Oklahoma City operators having wells within city limits are using high-speed vacuum pumps on wells producing large amounts of gas to remove the gas through the vent pipes before any cleanout work is started. The pump is also allowed to pull a vacuum on the well during the time the repair work is in progress. This practice practically eliminates all fire hazards that were present in the past and prevents men working in the gas from being overcome by fumes.

Front Exhaust for Trucks

A large oil company operating in Oklahoma has some thirty rod-and-tubing trucks equipped with the exhaust and muffler mounted on the front of the truck. As these trucks are always backed to a well when preparing to service it, the chance of a back-fire igniting escaping vapors is eliminated. After the truck is placed in position a flexible hose, about 10 feet long, is attached to the exhaust pipe and run away from the well.

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Long life has been emphasized in the construction as evidenced by all wearing parts being produced from the highest grade alloy steel. An effective seal positively prevents the loss of oil or contamination by the intrusion of mud or water. A fabricated steel base gives sturdiness with reduced weight.

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CONTINENTAL

Applying Colloidal Chemistry to Water Conditioning

By L. DREW BETZ
W. H. and L. D. Betz Laboratories

The task assigned to cover completely the subject of colloidal chemistry, is in itself one of considerable magnitude, but to attempt to cover, along with this subject, the subject of water conditioning as well, time must necessarily permit touching but very lightly on many of the subjects covered by these vast fields. In order that we may all have a clear understanding of the subject of colloidal chemistry, it will be necessary to go back to some of our elementary chemistry. . . .

To begin with, colloids are in reality a state of matter and not an individual substance. Many chemicals can be placed in the colloidal state, and by no stretch of the imagination can one assume that simply because a substance is of a colloidal nature, that it is suitable for water purification. Soaps, glues and many other substances are common illustrations of true colloids. Many metals can be placed in the colloidal state and yet are unfitted and have no value in this field.

To understand this better, it will be necessary to return momentarily to elementary chemistry and the study of true solutions. If we take a pinch of common table salt, chemically known as sodium chloride, and drop it in a glass of water and stir for a moment, the salt entirely disappears from view. The sodium chloride has ionized and the salt has gone into a true solution. If we were to place two electrodes in this solution, one charged positively and the other charged negatively, and pass an electric current through the solution, we would find that the salt, sodium chloride, had broken into its two component parts. Sodium, which carries a positive charge, will migrate to the negative pole and chlorine, which carries a negative charge, will migrate to the anode or positive pole. Figure 1 illustrates this phenomena. . . .

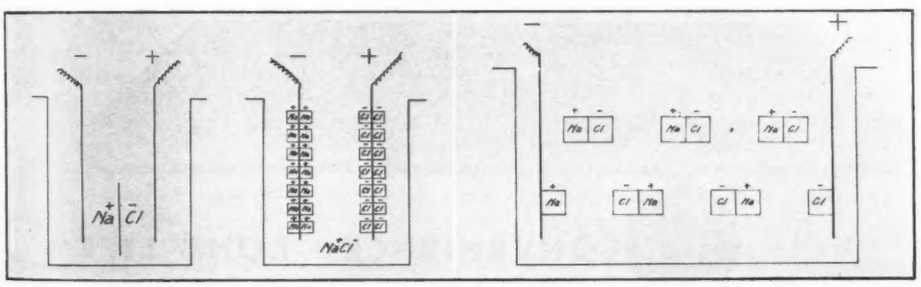

Fig. 1—Ionization of sodium chloride

Fig. 2—Migration of sodium and chlorine ions

In Figure 2 we have attempted to illustrate just how these ions migrate to the pole carrying a charge opposite to that which it carries.

In this you will notice the sodium ion has split off from the chlorine ion and has attached itself to the negative pole, while the chlorine ion has attached itself to the positive pole. This leaves free sodium and chlorine ions in solution which momentarily combine, reverse their position and then migrate further towards the pole, carrying the charge opposite to which they bear.

In 1861 an experimenter by the name of Graham noticed that when he made solutions of different substances some of these behaved quite peculiarly. This was particularly true of such substances as glues and certain types of gums. He noticed when he reflected a beam of light through a solution of the substance the light did not pass through clearly and as distinctly as it did with other substances that ionized completely. This light, he noticed, was diffused and scattered. The diffused passage of a beam of light applied in this manner is called a Tyndall cone (Figure 3) and is characteristic of colloids in general.

Graham later found this phenomena was due to the fact that the particles in solution were much larger than an ion, and that it was the great multitude of these large particles which caused a diffusion of the light. Substances which behaved in this manner he called colloids, from the French word meaning glue, and differentiated them from those substances which permitted a beam of light to pass through their solutions clearly and distinctly. This other class of substances was called crystalloids.

From this crude beginning, a great number of scientists have compiled a tremendous amount of data on the subject of colloids. Today colloids are considered an entirely different state of matter and are differentiated from other substances on the basis of their particle size.

It has been found that when colloids are placed in solution they do not ionize or break down into ionic particles as we have just described, but rather go into solution as a single particle or unit containing all of the substance as a whole. In this respect they are somewhat similar to sugar and substances of a like character, but differ from these substances in that they do not break down into a single molecule, but usually a combination of several molecules. Colloids are in reality giant molecules and hence many times larger than an ion.

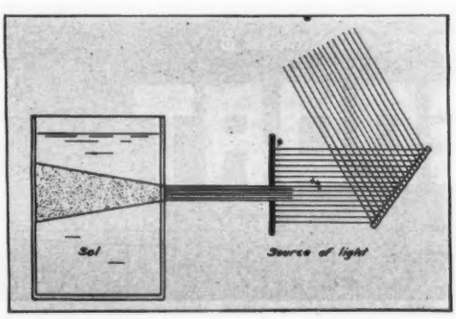

Fig. 3—Tyndall cone (after Bary)

From the foregoing we can readily see that lying between the states of matter known as true solutions and suspensions there is another state of matter. This is known as the colloidal state. There are fairly clear lines of demarcation between true solutions, colloids and suspensions, and these lines of demarcation or classification are based on the particle size of the various substances. Figure 4 will serve to illustrate these divisions.

W.P.R.A. **— Presented Before Regional Meeting at Wichita, Kans., September 21, 1937**

Colloidal particles are so small it has been necessary to devise special units of measurement in order to reduce the cumbersome handling of large figures. In order to better understand the classification of a colloid, we should first understand these units of measurement. The unit of length commonly used in measuring a colloid, is the micron. This is one one-thousandth of a millimeter or four one-hundred-thousands of an inch. A smaller unit of length is also used and known as a millimicron, which is one one-thousandth of a micron and is equivalent to four one-hundred-millionth of an inch.

Referring to the diagram (Figure 4). To the extreme left, we have true solutions; those substances which diffuse readily and which will pass through the finest filters. These substances do not exhibit Brownian movement, a peculiar phenomena limited to the colloidal state of matter which we will explain in detail later. The largest size of the particles falling in this class is one millimicron.

On the extreme right we have suspensions, those substances which are retained by filters and which can be separated by gravity through settling. You will notice no Brownian movement is perceptible in this state of matter, thus resembling true solutions in this feature. The smallest particle size in this class is one micron. In between these two states of matter we find true colloids, the upper limitation of particle size being one micron and the lower limitation being one millimicron. These substances when placed into solution, will pass through the finest filter papers, but they will not diffuse or ionize in the manner described earlier. . .

In as much as all matter exists in three different forms—gases, solids and liquids—there are nine possible combinations or nine different classes of colloids which we could prepare from these three different forms of matter. However, all gases known to man will mix together in any proportion and it is therefore impossible to have a gas dispersed in another gas. Table 1 will explain the different types of colloids which are known and gives illustrations of each example.

The question now arises: How can we approach this colloidal state of matter? How do we make a colloid? This can be achieved in either of two

(Continued on Page 59)

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The 8-46 Straight Line GUMBO BUSTER CROWN BLOCK is built to handle the heaviest loads encountered in deep drilling at maximum speeds with perfect safety to men and equipment.

Two 8-inch diameter, forged alloy steel pins carry the 46-inch Manganese Steel Sheaves on heavy duty American Roller Bearings. Constructed with six Sheaves in line, the Block is only 47-inches wide—narrow enough to be used on derricks with small water tables. Sheaves are Alemite lubricated through the center pins from either end of each pin.

The Frame is constructed of reinforced 15-inch, 55-pound outside channel beams with center beam built-up of heavy reinforced channels bolted together to form an I-Beam Cast electric steel bearing boxes are welded to the frame.

(GUMBO BUSTER CROWN BLOCKS are also furnished in two other sizes—the 8-36 for average service, and the 7-36 for lighter duties. All sizes carried in Bridgeport Stores.)

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The 8-46 Block weighs 6,475 pounds. It may be taken to the top of the derrick in one piece, or in either two or four sections by simply removing a few bolts.

Either half of the block can be placed on the side of the water table nearest the driller, and either section of three sheaves can be placed in either half of the frame without regard to which sheave is on the outside

This feature of inter-changeability permits any one of the four outer sheaves, on the two pins, to be used as the fast sheave, so the heaviest wear may be transferred from one sheave to another as the Block is moved from location to location.

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Corrosion of Metals in Soils

as a Factor in Selecting Materials for Pipe Lines

By DR. SCOTT EWING
National Bureau of Standards, Washington, D. C.

Tests of the corrodibility of a large variety of metals in soils have progressed sufficiently to permit one to specify, in a general way, the types of pipe materials which are best adapted to certain soil conditions. These tests also permit certain conclusions to be drawn relative to the effect of some chemical constituents of the metal on the corrodibility in soils of the commonly used ferrous materials. The reasons for the protective value of certain metallic coatings and the failure of other types can also be stated.

It is not the purpose of this paper to make any broad recommendations as to the composition of ferrous metals for pipe lines or as to the proper choice of a metal for any particular situation. The purpose is merely to point out what conclusions may be drawn from the results of corrosion tests. There are many other considerations besides resistance to corrosion which should govern the choice of metals for pipe lines. To weigh all of these factors properly and thereby to reach definite general conclusions is far too involved to permit any general statements or recommendations.

Corrosion Resistance of Ferrous Metals

A. *The Common Ferrous Metals.* Most investigations of pipe-line corrosion have been concerned with the important problem of identifying the soils which are corrosive to ferrous metals. In this paper the subject will be varied slightly by discussing the somewhat minor effect of the composition of the ferrous metals on the corrosion rate. The differences in the rates of pitting of the commonly used ferrous materials, although small, are, nevertheless, significant and these rates are believed to be related to the composition of the metals.

The average depths of the deepest pits (average of deepest pit on each specimen) on eight commonly used ferrous materials over an interval of 12 years have been calculated by the National Bureau of Standards, by a method which tends to eliminate the variations along the trench, makes use of all of the data for all locations where comparisons can be made, and includes the fewest possible assumptions as to the form of the corrosion-time curve. A calculation has also been made of the precision of these averages. The results are shown in Figure 1 which is taken from the bureau report.[1] The lines equidistant from, and on either side of the average, which designates the standard deviations, indicate that it is reasonably certain that the average actually lies within this range.

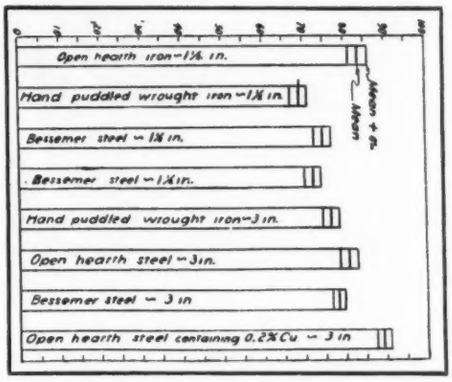

Open hearth iron – 1½ in.
Hand puddled wrought iron – 1½ in.
Bessemer steel – 1½ in.
Bessemer steel – 1½ in.
Hand puddled wrought iron – 3 in.
Open hearth steel – 3 in.
Bessemer steel – 3 in
Open hearth steel containing 0.2% Cu – 3 in
Mean ± σ

Fig. 1—Average depth of deepest pits for 12 years of exposure in 23 soils

A. G. A.—Presented before annual meeting of American Gas Association in Cleveland, Ohio, September 27 to October 1, 1937

It is evident from the figure that although the differences between metals are small, there are cases where the differences are too great to be ascribed to accident or to experimental error.

The chemical compositions of these metals[2] are given in Table 1 The data in Table 1 do not correspond exactly to the data already published by the bureau because subsequent analyses of some of the metals have changed some of the averages slightly.

The pitting rates of the materials, of Figure 1 plotted against the percentages of carbon, manganese, sulfur, silicon, copper and phosphorous given in Table 1, are shown in Figure 2. The ranges in the pitting rates, indicated by vertical lines, are the same as the ranges shown in Figure 1. In all of these plots except that for phosphorous the points appear to be scattered in an erratic way. If carbon, manganese, sulfur, silicon or copper within the ranges of composition of Table 1 have any effect on the pitting rate, it is not evident from the data.

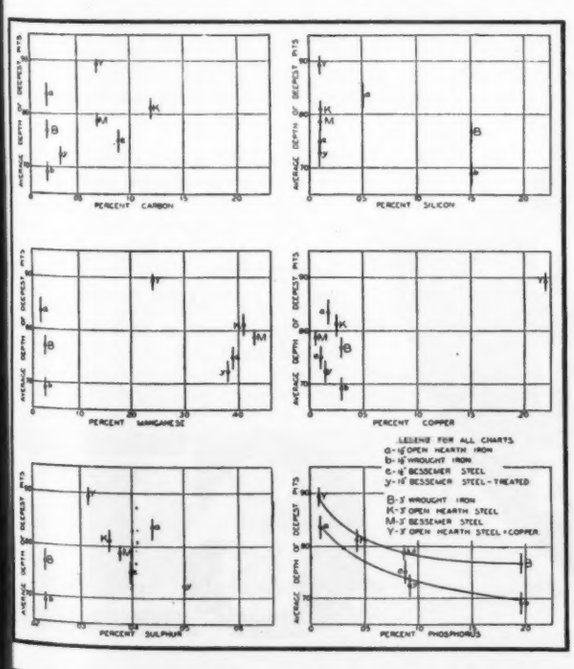


Fig. 2—Average depth of deepest pits plotted against percentage of chemical constituents

The average depth of the deepest pits, plotted against the phosphorous content is the last chart shown in Figure 2. One might conclude from a casual inspection of this figure that the correlation, while definite, is still rather poor, and that out of six chances (six alloying elements) at least one of these chances would appear to have a trend, even though there were no true trend. In examining the figure it should be remembered that since the area of the 3-inch specimens is greater than that of the 1½-inch specimens, the average depths of the deepest pits should be greater on the larger specimens. In every case where there are specimens with different areas and nearly the same phosphorous content, the average depth of the deepest pits on the larger specimens is greater. Obviously, the specimens having the same size should be considered separately from those differing in size. Hence there are two groups with four materials in each group. It will be observed in the figure that in each group of four, the materials are arranged in a consistent order with respect to phosphorous content.

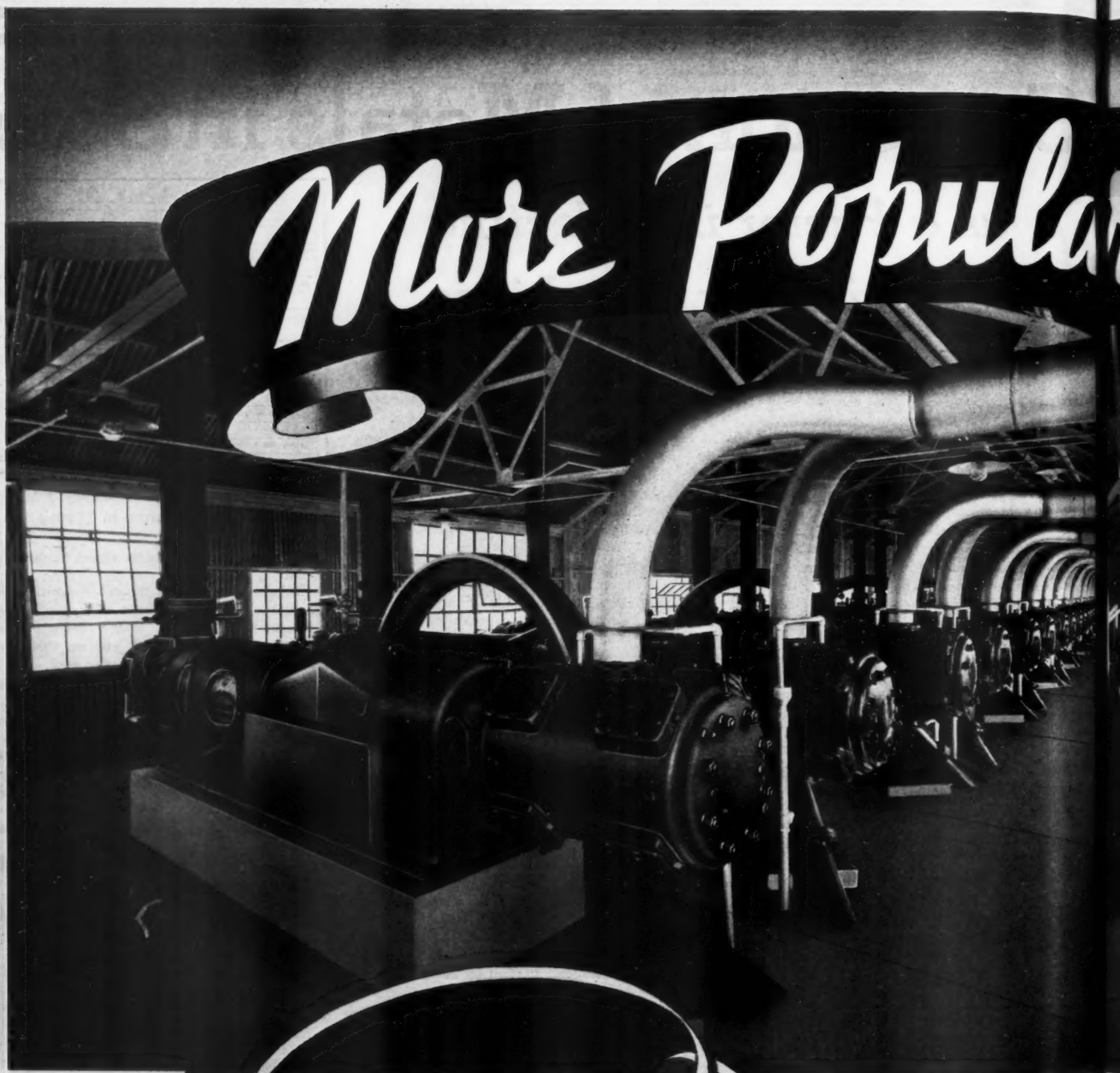
Phosphorous Content

The phosphorous content of wrought iron is the total phosphorous in both metal and slag. The amount in the slag varies from 40 to 60 per cent of the total.[3] Hence the positions of the points for wrought iron are not known accurately. But even if the wrought iron is not considered at all, the previous statement still holds.

With only eight ferrous metals and the possibility that any one or all six chemical constituents may either increase or reduce the corrosion rate, it is hopeless to attempt to determine the effect of each one. All that can be said is whether or not the results indicate any such effect. The results indicate no noticeable benefit from copper.

The effect of alloying elements on the resistance of ferrous metals to submerged corrosion and atmospheric corrosion have been investigated by Taylerson and Kendall[4] by means of a statistical analysis of the extensive A.S.T.M. data on ferrous sheets. The conclusions which have been drawn from the soil corrosion tests with respect to the effects of the alloying elements can be shown to be in rough accord with the conclusions reached from the submerged and atmospheric tests. Kendall and Taylerson expressed the conclusion that: "at the Pittsburgh location, phosphorous, combined with copper, has beneficial effects from an atmospheric corrosion standpoint. Manganese and sulfur,

(Continued on Page 54)



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within the limits of composition involved, seem to have little if any effect either way." These authors also found that in submerged corrosion all of the common elements had no appreciable effect within the range of composition.

It may appear rather surprising that the beneficial effect of phosphorous, up to about .10 per cent is in accord with the results of the atmospheric tests and not in accord with tests under water. However it seems reasonable to suppose that soil corrosion tests are more like atmospheric than submerged tests, because in most soils the air is of nearly the same composition as the atmosphere. The oxygen supply is probably in some way closely associated with the beneficial effect of phosphorous. There is also other evidence that phosphorous has some beneficial effect on corrosion resistance but this evidence will not be discussed here.

Analysis of samples of old puddled wrought iron[5] indicate that this material was often relatively high in phosphorous. Even though part of this phosphorous was in the slag, the iron itself probably contains more phosphorous than most steels. This may be one of the reasons contributing to the exceptional performance of some old wrought iron pipe lines. Another reason is that when a new pipe is laid alongside an old one and connected to it, the old pipe is cathodically protected at the expense of the new pipe.[6, 7]

B. *High Silicon, Chromium and Nickel Alloys.* The effect of large percentages of chromium, silicon and nickel on the resistance of ferrous metals to corrosion in the atmosphere is well known. The use of stainless or rustless steels for various purposes and under various trade names has become so general that almost everyone is familiar with their durability and usefulness. The small number of available data on the behavior of some of these metals in the soil will be briefly summarized.

Cast iron containing 14.5 per cent of silicon, a hard brittle, nonmachinable material known by the trade name of Duriron, is in general highly resistant to soil corrosion. Specimens of this material have been removed from 47 test locations after eight years' exposure. The loss of weight of the specimens was significant at only three of these locations and only one of these specimens showed definite evidence of pitting.[1]

Corrosion of Chromium Alloys

Specimens of wrought material containing 26 per cent of chromium have been exposed for approximately eight years in seven locations. According to the bureau report[1]: "A very large percentage of the area of each specimen showed no corrosion, but several of the specimens have sustained severe local pitting. In two soils the maximum pits were deeper than on Bessemer steel, although the rates of loss of weight were less for the alloy in all soils."

Specimens containing from 5 to 22 per cent chromium and from 3.8 to 13 per cent nickel have been exposed for a period of two years. Some of the thin sheets were penetrated even in this short time so that the pitting rate could not be determined. From the results it appears that the addition of 5 per cent of chromium to low carbon steel had practically no beneficial effect in reducing pitting. The rates of loss of weight for all the specimens containing chromium and nickel in higher percentage were considerably less than the rate for plain steel, but the corrosion of these alloys was always concentrated in a few places and the pitting was rather severe. Every sheet was penetrated in one soil and four out of seven were penetrated in another. It is evident from the data and the appearance of the specimens, even after only two years' exposure, that most of these chromium and nickel steels have little advantage over ordinary steels in their resistance to soil corrosion, under the conditions obtaining in the tests.

TABLE 1—CHEMICAL COMPOSITION OF FERROUS METALS

Pipe diameter (inches)	Material	C %	Mn %	P %	S %	Si %	Cu %
1½	Open hearth iron	0 02	0 02	0 009	0 044	0 05	0 018
3 and 1½	Wrought iron (hand puddled)	02	03	192	023	15	03
1½	Bessemer steel	09	39	088	040	01	011
1½	Bessemer steel	034	38	092	050	01	015
3	Bessemer steel	07	43	087	038	01	006
3	Open hearth steel	12	41	043	036	01	025
3	Open hearth steel (copper bearing)	07	24	008	032	01	22

TABLE 2—CHEMICAL CHARACTERISTICS AND CORROSION OF LEAD IN SOME OILS

Soil number and name—	pH	Sulfates m.e.* per 100 g	Corrosion of commercial lead over 10-12-year period: Loss of weight (oz./sq. ft./yr.)	Pitting (mils/yr.)
No corrosion:				
13. Hanford fine sandy loam	9 5	3 76	03	0
23. Merced silt loam	9 4	37 50	03	.5
45. Alkali soil	7 4	11 98	.021	2 0
Concentrated attack:				
1. Allis silt loam	7 0	.83	.173	9 4
5. Dublin clay adobe	7 0	.25	.135	4 0
20. Mahoning silt loam	7 5	.15	.268	4 4
30. Muscatine silt loam	7 0	.24	.126	4 4
35. Ramona loam	7 3	.35	.017	3 4
47. Alkali soil	7 6	.48	.122	9 1
Uniform attack:				
29. Muck	4 2	2 30	.343	1 1
33. Peat	6 8	2 13	.116	1 7

*Milli-equivalent per 100 grams of soil.

Resistance to atmospheric corrosion and high electrical conductivity are the principal features which distinguish copper among the relatively cheap metals. It is used for small water pipes in buildings, often being alloyed with zinc and small amounts of tin, lead, nickel and other metals. Brass cocks and valves have been used underground for many years. Copper water service pipes are frequently used and some gas companies have installed a considerable amount of copper pipe for services and small mains.

Corrosion of Copper

The mechanism of the corrosion of copper is in some ways more complicated than that of iron. Copper is more noble, i.e., more like gold, silver and platinum, than most of the common metals, so that differences in oxygen concentration have less effect in setting up potential differences on its surface than is the case with the baser metals. For this reason pitting is not likely to occur in solutions unless in some way oxygen is almost entirely excluded from the metal surface in places. This exclusion of oxygen can occur is sparingly soluble cuprous salts are formed at anodic areas. Chloride solutions will produce cuprous chloride which will absorb oxygen and form Cu(OH)Cl. This compound effectively shields the anodic areas, especially if the solution is alkaline.[8] Hence in soils containing chlorides and carbonates corrosion may take the form of pitting. Since copper does not form tubercles or dense membranes of corrosion products, there is nothing to reduce the pitting rate so that it will probably continue at a constant or even increasing rate. There are other conditions which may set up differential aeration cells, but they are not likely to occur in soils.

Any condition which sets up potential differences on a copper surface will cause corrosion. Contact with cinders containing unburned carbon will produce rapid and serious pitting. Copper is rapidly attacked by hydrogen sulfide with the formation of copper sulfide in the form of a black adherent scale, which, however, does not appear to protect the metal. Hydrogen sulfide is produced in tidal marshes through the decomposition of organic matter. There are other conditions which may produce rapid corrosion of copper, such as rapid motion of the solution and certain conditions at the surface of some liquids, but these conditions are not likely to occur in the soil.

The important conditions which may result in appreciable corrosion of copper have been stated. If they do not exist in a particular locality it is reasonably certain that no serious corrosion will occur. If they do exist, the corrosion may not always be sufficiently severe to cause failure of pipes. The data on corrosion of copper and copper alloys as reported by the Bureau of Standards[9] are not reported in detail here, but a few observations from the data will be made to indicate roughly the conditions that cause serious corrosion of copper. From the data on loss of weight and pitting rates in cinders it is evident that both copper and copper alloys, as well as all ordinary ferrous metals, are rapidly destroyed. No common pipe metal could last very long in this "soil." The rapid attack of copper can be attributed to the contact of the pipe with unburned carbon as already mentioned, although the sulfides contained in the cinders may also assist in this. Although the data indicate that the rates of loss of weight and pitting for copper in cinders are a little less than one-half those for steel, certainly it is inadvisable to use copper pipe in such a "soil."

The attack of copper in tidal marsh is uniform over the metal surface and rather rapid (about .6 ounce per square foot per year). The corrosion product is a black, closely adherent scale, probably consisting mostly of copper sulfide. The rate of loss of weight does not appear to have decreased appreciably over a period of eight years. The rate of loss of weight of ferrous pipe materials at this site is approximately twice the rate for copper. Lead and Muntz metal (to be discussed later) are the only metals which give much promise of permanence in this kind of soil.

Copper in Alkali Soils

Soils composed mostly of organic matter, such as peat and muck, and one or two other soils in the bureau test attack copper appreciably. The rate of loss of weight was found to be about one-tenth ounce per square foot per year and the pitting rate over an eight-year period about 2 mils per year. The attack can be associated with the organic acids in these soils which tend to dissolve the protective oxide film. In such soils copper has a decidedly lower corrosion rate than ferrous materials and would last a rather long time but it could not be considered permanent.

The data on the corrosion of copper and copper alloys in alkali soils are difficult to explain fully. In many of these soils the rate of corrosion was appreciable and did not appear to be related to resistivity or to any other easily identified soil characteristic. It has already been indicated that chlorides and carbonates (indicated by a high pH) tend to cause and to maintain differential aeration cells by shielding anodic areas from oxygen. Most alkali soils contain some chlorides and a few contain carbonates. The alkali soils which were least corrosive to copper contained no carbonates and the ratio of chlorides to sulfates was low. The most severe corrosion usually occurred in soils that had a high pH value and a high ratio of

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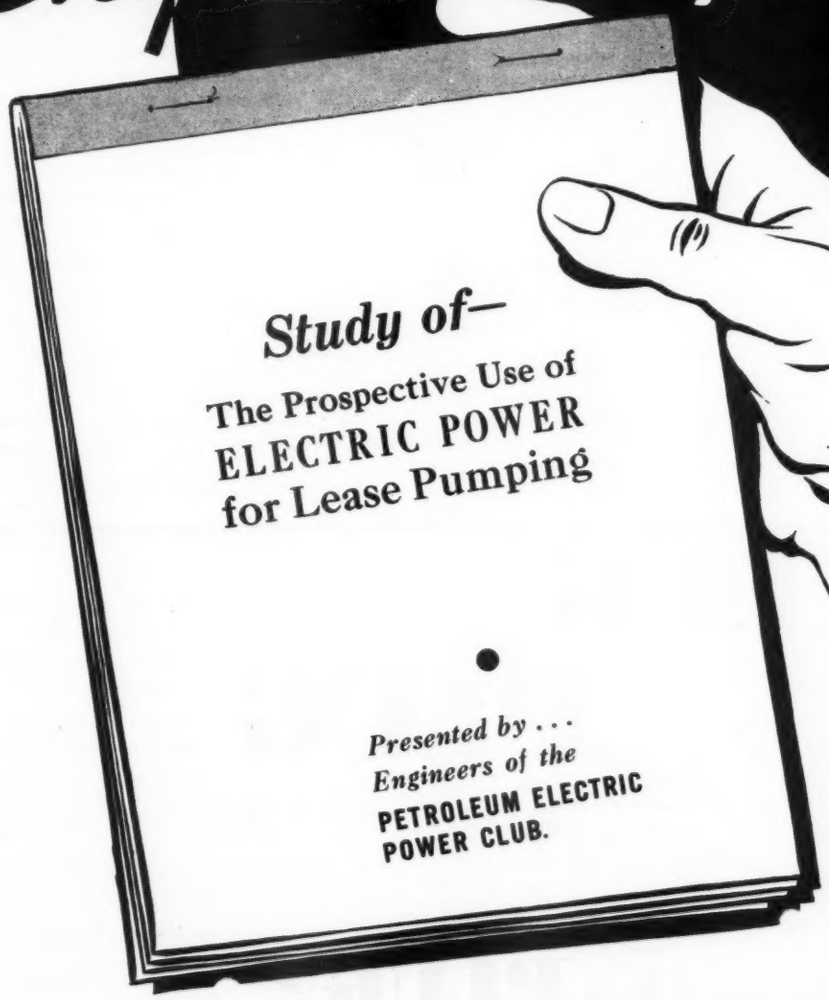

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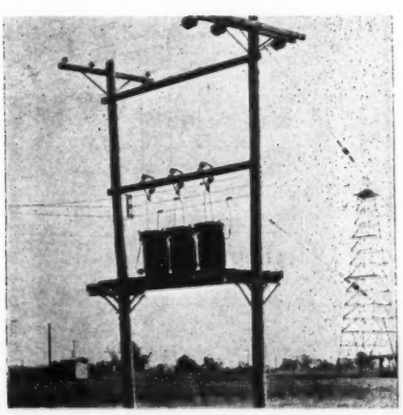

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chlorides and carbonates to sulfates. The reason for the high corrosion rate in Hanford fine sandy loam (soil 12 in the bureau test) is not evident from the chemical analysis or other known facts about this soil. In one other sandy soil (Gloucester sandy loam, No. 10) the corrosion rate of copper was higher than tests of the properties of this soil would lead one to expect.

In general the corrosion rates of the high-copper alloys for which data are available were found to be about the same as for copper. Since lead is practically unaffected in most alkali soils, especially if there is some carbonate in the soil, one might predict that an alloy of copper containing as much lead as possible might be more corrosion-resistant than copper in these soils. However, the small amounts of lead in some of the alloys in the bureau test showed no appreciable beneficial effect.

The behavior of Muntz metal (a brass containing nominally 60 per cent Cu and 40 per cent Zn) was different from that of the high-copper brasses. This metal usually corroded by losing zinc, so as to form a copper-rich spongy material having little strength. Since this corrosion process is rather rapid, Muntz metal is in general not suitable for pipes, especially in corrosive soils. However, in tidal marshes Muntz metal showed much less loss of weight than copper or high-copper brasses and only very slight dezincification. It is therefore probably better adapted to this soil than either copper or high-copper alloys.

The corrosion rates of copper and high-copper alloys were usually much less than the corrosion rates of the common ferrous metals. In only a few alkali soils was the rate of corrosion of lead found to be less than the rate of corrosion of copper. The available information indicates that the rate of pitting of copper does not slow up as corrosion proceeds as is the case with ferrous metals, and there is no evident reason why it should.

If a large amount of copper pipe is connected to a small amount of ferrous pipe, corrosion of the ferrous pipe will be accelerated by galvanic action. If a small amount of copper pipe is connected to a large amount of ferrous pipe, as is usually the case when copper pipe is used, the steel will not be seriously affected except possibly for a few feet near the juncture of the two metals. The copper pipe will then be more or less cathodically protected and hence should last considerably longer. Cathodic protection at the expense of the steel pipe may be a contributing reason for the excellent results that have been obtained with copper installations underground.

Corrosion of Lead

Lead has been used since ancient times and many very old specimens have been found that are still in excellent condition. The Romans used lead pipes for water distribution and some of these pipes are said to be in use today.[10] Lead has almost unlimited life in the atmosphere and is relatively stable in most soils. At the present time lead is used underground principally for telephone and power cables. It has been used for water and gas service. One gas company with 50,000 services used lead for service pipes prior to 1915. It is also used for calking and for gaskets. Nearly all telephone cables are laid in vitrified clay ducts; instances have been reported[10] showing that unprotected installations in the soil have not been successful. Most of the instances where corrosion failures of cable sheaths in ducts have occurred have been the result of some unusual condition in the ducts or of electrolysis.

The corrosion resistance of lead can be attributed in part to the formation of an insoluble surface film of lead oxide, sulfate or carbonate which protects the metal from further attack. Soils which attack iron and steel do not always attack lead. Soils that contain sulfates or carbonates form a protective surface film of lead sulfate or carbonate on the metal. Oxygen, nitrates, chlorides, alkalies and organic acids tend to corrode lead, either because they set up potential differences on the metal surface or because they tend to dissolve the protective film. The ratio of the concentrations of the film-forming to the corroding substances determines the character of the attack. "For high values of the ratio the metal is protected, for low values it is uniformly corroded, and for intermediate values the surface is partly protected with the result that the corrosion will be localized in the form of destructive pitting."[10] It is not possible to calculate the exact value of this ratio, because some film forming and some corroding substances are more effective than others, but according to the bureau results on the corrosion of lead, soils more or less characteristic of each of these three conditions may easily be distinguished. Examples of these three types of soils are shown in Table 2.

In the first group, the presence of carbonates in soils 13 and 23 (indicated by the high pH values) and the high content of sulfates prevented any appreciable corrosion. The second group of soils, which includes all of the soils out of a total of 47 in which the rate of pitting of the lead was greater than the rate for the ferrous materials, can be taken as typical of those in which conditions obtain which are likely to result in pitting of lead. They are nearly neutral in reaction and contain practically no sulfates or other soluble material. Soils 29 and 33 caused a rather large loss of weight of the lead without excessive pitting. They are both composed chiefly of organic material. The soils of Table 2 do not illustrate all possible conditions favorable to corrosion. In the in-

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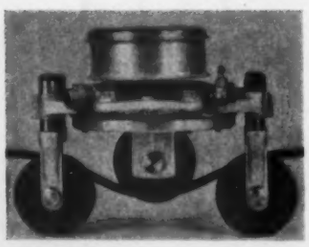

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termediate ranges the soil properties shown in Table 2 will not always fully account for the corrosion observed, because the pH value and sulfate content are not the only factors which determine the corrosion rates and the character of the attack.

Metallic Coatings

The conditions that are necessary to obtain an effective metallic coating may be understood by noting the behavior of lead and zinc coatings as reported by the Bureau of Standards.[11] Specimens of 2-inch open hearth iron pipe, 17 inches long, with a zinc (galvanized) coating whose average weight was 2.82 ounces per square foot, were removed from 41 locations after a period of exposure of about 10 years. In only one location, the very corrosive soil at Buttonwillow, California, were any measurable pits found on these specimens. The rate of loss of weight of the galvanized specimens ranged from one-tenth to one-half the rate of loss of weight of bare steel pipe under comparable conditions. Where it has been possible to make comparisons, the rate of loss of weight of the galvanized iron was found to be less than the rate of loss of weight of either steel or zinc. There is no question that under the conditions of these tests, heavy galvanized coatings afford considerable protection.

Specimens of lead coated pipe have been buried in most of the locations in the Bureau of Standards test, generally with unsatisfactory results. The following, taken from the bureau report, describes the results obtained from the 10-year-old specimens of lead-coated pipe which were removed from 35 locations. "Only in Ramona loam were the specimens free from pits. In Dublin clay adobe, the coated specimens were worse than the uncoated both with respect to loss of weight and maximum penetration. In 13 of the 34 soils for which comparisons can be made, the rates of maximum penetration were greater for the coated specimens. Severe pitting of lead-coated specimens occurred in several soils in which commercial lead cable sheath was attacked but little." This great difference between lead and zinc coatings needs an explanation and the explanation is not to be found in the superior corrosion resistance of zinc, because zinc usually corrodes faster than lead in the soil. The thickness of the lead coating in its thinnest places was considerably less than the thickness of the zinc coating, but from other data on thinner galvanized coatings it is clear that the difference in thickness will not explain the great difference in behavior.

Whenever two dissimilar metals are placed in a solution, one of the metals has a greater tendency to dissolve than the other. If the two metals are connected with a wire, an electric current will flow through the wire. According to conventional methods the direction is toward the metal which dissolves most readily and through the solution toward the metal which dissolves least. This is essentially all there is to any electric battery. When the current flows through the wire, the anodic metal, which is the negative pole of the battery, dissolves or corrodes, the rate of corrosion being nearly proportional to the magnitude of the current. On the basis the results of experiments of this kind all metals can be arranged in the so-called electropotential series, the metals at one end being generally cathodic or noncorrodible while those at the other end are anodic or corrodible. In Table 3, taken from McKay and Worthington,[11] the metals have been arranged in such a series. Any metal in the list, if connected to a metal below it in the series, will be anodic when both metals are placed in dilute salt or acid solutions.

In any metal film used as a protective coating for another metal, there are usually small defects such as pinholes or other discontinuities in the metallic coating. If the pinholes were not originally present, they will soon appear because every metal corrodes somewhat. When pinholes appear in the metallic coating the conditions are exactly similar to the conditions in a battery. At each discontinuity in the coating the two metals, i.e., the base metal and the metal coating, are in intimate contact and both are wet with the solution. One of the metals tends to dissolve, i.e., to corrode, and the other will be at least partially protected cathodically.

Consider first the case of a zinc coating on steel. From Table 3 it is seen that zinc is more reactive than iron. Hence the zinc will corrode, the current will flow from it through the solution to the bare iron which will be cathodically protected. Hence the iron cannot corrode as long as enough zinc remains to protect it.

Now consider the lead coating on steel. According to the table, iron is more reactive than lead. In the lead-iron combination the iron is the anodic metal and it will corrode and the lead will be protected. Hence, if there are any holes in the lead coating the iron will immediately start to corrode and ultimately to pit. The lead coating is useless if there are any pinholes in it.

It can be taken as a general rule that a protective metallic coating applied to any metal may be expected to be less effective if the metal used as the coating lies below the other metal in the series in Table 3 than similar coatings in which the coating metal lies above the other metal in the series. A lead coating might afford effective protection to copper in soils where copper is appreciably corroded and lead is not, as is the case in some alkali soils. The best way to answer these

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questions is by actual tests. They are merely suggested as possibilities.

TABLE 3—GALVANIC SERIES OF THE METALS

(From McKay and Worthington)

Corroding end (anodic)	This series is built upon actual experience with corrosion and laboratory measurement. Metals grouped together have no strong tendency to produce galvanic corrosion on each other; connecting two metals distant on the list from each other tends to corrode the one higher in the list. Voltage figures are not given because they vary with every new corrosive condition. Relative positions of metals change in many cases but it is unusual for changes to occur across the spaces left blank. The chromium-irons and the chromium-nickel-irons change positions as indicated depending on oxidizing conditions, acidity and chloride in solution. The series as it stands is correct for many common dilute water solutions such as sea water, weak acids and alkalies.
Magnesium	
Aluminum	
Duralumin	
Zinc	
Cadmium	
Iron	
Chromium-iron (active)	
Chromium-nickel-iron (active)	
Soft solder	
Tin	
Lead	
Nickel	
Brasses	
Bronzes	
Nickel-copper-alloys	
Copper	
Chromium-iron (passive)	
Chromium-nickel-iron (passive)	
Silver solder	
Silver	
Gold	
Platinum	
Protected end (cathodic)	

Summary

A comparison of the pitting rates of the wrought ferrous materials in the Bureau of Standards soil corrosion test with the chemical compositions of these metals indicates that increasing the content of phosphorous up to about 0.10 per cent reduces the pitting rate slightly. Other alloying elements appear to have no effect on corrosion resistance. This is in general agreement with the A.S.T.M. results on the atmospheric corrosion of steel sheets differing in composition. The beneficial effect of copper which was noted in the A.S.T.M. test was not observed in the soil corrosion test.

Serious corrosion of copper is likely to occur in cinders and tidal marshes. Soils high in organic matter and alkali soils in which the ratio of chlorides and carbonates to sulfates is high corrode copper appreciably.

The corrosion of lead is practically negligible in soils high in sulfates and carbonates. It takes the form of pitting in soils that are about neutral in reaction (pH 7) which contains very little soluble material, especially sulfates. In soils containing organic acids the attack is general (uniform corrosion) but the rate of penetration is rather low.

The effectiveness of zinc coatings and the poor protection afforded by lead coatings on steel is primarily due to the fact that zinc is anodic to steel and lead is cathodic.

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Applying Colloidal Chemistry

(Continued from Page 49)

manners. The first method is to take a large piece of material and break it down continuously and to subdivide it until its particle size falls within the colloidal range. This method simply resolves itself into a reduction of particle size; a reduction of one large particle into a great many smaller particles. The second method is to start with particles smaller in size than those of a colloid and to build them up into larger particles, until they reach the colloidal size. In this instance, we simply build a tiny particle up to the size of a giant molecule. There are several different known methods of going from the larger size particle of suspension to the smaller particle size of a colloid — chief among which is grinding through an apparatus known as a colloid mill, and by mixing with the particle, another substance that will prevent the resulting particles adhering together, to form larger ones again. This latter treatment is known as peptization.

The other method of preparing a colloidal dispersion by building up the particle size of the true solution can be illustrated by mixing together a solution of a calcium salt and alcohol. The calcium salt is a true solution but has a lesser solubility in alcohol. In adding to the alcohol, which is the dispersing medium, the molecules of calcium gradually become insoluble and several of them coalesce or agglomerate, forming a giant molecule. The formation of a great number of these molecules causes a swelling action with the resulting formation of a gel, as illustrated.

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All particles in a colloidal state, possess an electric charge. This can be proven by placing a pair of electrodes in a colloidal dispersion and passing a charge through the solution; the colloidal particles plating out on the electrode with the opposite charge to that possessed by the particle itself. The particle itself will not break down into its component parts, as in the case of ionization, but will travel to the electrode as a whole. The system of solids dispersed in water can be further subdivided into hydrophobic or water hating colloids and hydrophilic or water loving colloids. A hydrophilic colloid differs from a hydrophobic colloid in that each particle is surrounded by a sphere of water, commonly called the shell of hydration.

It is well to remember in speaking of electrical charges carried by colloidal particles that such charges are a great deal more numerous than those carried by electrons. As a matter of fact, each particle carries several layers of charges, each of which is of the same sign. The total number of charges in a given volume of a colloidal dispersion increases as the particle size decreases. This is very important, as it readily explains the increased activity of chemical reactions where colloids are involved.

TABLE 1—DIFFERENT TYPES OF COLLOIDS

Dispersed phase		Dispersion medium	Illustrations—
Gas	in	Liquid	Foam, whipped cream, lather
Gas	in	Solid	Meerschaum, lava
Liquid	in	Gas	Mist, fog, clouds
Liquid	in	Liquid	Milk, mayonnaise
Liquid	in	Solid	Cosmetics, creams, shoe polish
Solid	in	Gas	Smoke, dust
Solid	in	Liquid	Gelatin and metals in water
Solid	in	Solid	Some alloys; gold in ruby glass

Certain types of colloids have been found to possess exceptional merit in the field of water conditioning. These may briefly be classified as protective colloids and reactive colloids. Their action is vastly different and the general tendency to class all colloids used in water purification together has led to confusion and a misunderstanding of the value of these materials in this work. A protective type of colloid is one that does not enter into the precipitate as it is formed. This will prevent the coalescing of several small crystals to form larger ones, or from adhering to surfaces when settling out of solution. The reactive type of colloid is one that possesses infinitely more value, in that it possesses a direct reaction and to remove from solution various incrusting solids such as calcium and magnesium.

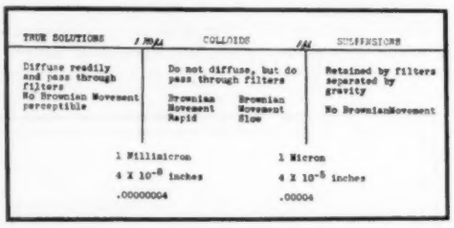


Fig. 4—Classification of a colloid

It is not to be implied that a straight chemical reaction can be written showing a given molecular weight of colloid reacting with a given molecular weight of calcium or magnesium, or in other words that the reaction proceeds in stoichiometric fashion. The important point is that the reaction does not proceed in a stoichiometric fashion and that the ratio is variable and for this reason can be termed a colloidal reaction. Figure 5 illustrates this reaction and shows how polyvalent positive ions react with the hydrophilic sol to peptize it and to transform it into a gel.

Precipitation of Hydrophilic Colloid

Starches and tannins can be classed as protective colloids and possess certain values in inhibiting crystal growth. They are both hydrophobic colloids, positively charged and will not react with any polyvalent positive ion such as calcium or magnesium.

Another colloid which does possess the desired property of reacting with these polyvalent positive ions, and which we have very successfully applied to our work, in water conditioning, is one belonging chiefly to the laminaric acid series. These colloids are hydrophilic and carry a negative charge and may be peptized to various degrees with

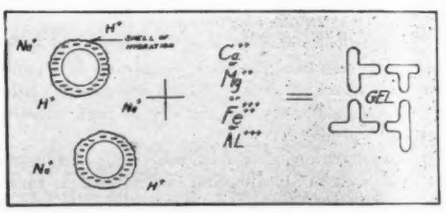
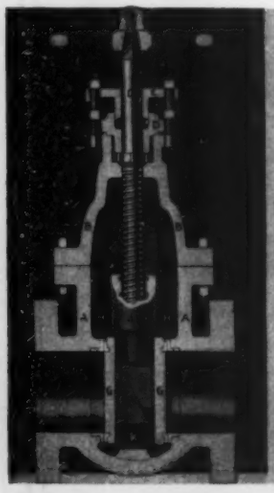


Fig. 5 — Precipitation of hydrophilic colloid by polyvalent ions (e.g. Ca^{++}; Mg^{++})

sodium salts. The amount of peptizing agent employed, determines to a large extent the particle size of the sol. When calcium or magnesium ions, or any other polyvalent positive ions are added to a system with this sol present, a selective adsorption of the calcium and magnesium ions occurs with the removal of these ions from solution. An ion of calcium or magnesium will be removed for each two negative charges carried on the micelle and each particle is therefore capable of taking up several calcium or magnesium ions. This results in the transference of the colloid from a sol to a gel and thus the actual removal of calcium and magnesium is effected in an organic form, in a type of precipitate which cannot adhere or crystallize, due to the entire absence of a crystalline structure. Furthermore, the gel precipitate formed, by virtue of its enormous surface, possesses the ability to remove suspended solids through the physical property of adsorption, to a very large degree.

The oil refiner is faced with two major water problems. One of these is the problem of the conditioning for boiler purposes; the other, the problem of water conditioning for cooling. Reactive colloids have a wide and very favorable application in both these fields and can be used in a decidedly beneficial manner, in solving both problems. Their most advantageous use, however, can only be determined by a complete study of the individual problem in hand,—keeping foremost the thought that full advantage should necessarily be employed to derive the most beneficial results from a combination of all known and proven methods of water conditioning, and by applying reactive colloids to best suit the individual condition.



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QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Stoddard Solvent Specifications. Revision Effective Feb. 10, 1938

Will you kindly furnish the latest and complete specifications for Stoddard Solvent, as adopted by the U. S. Bureau of Standards?—R. Y. H.

The refiners making Stoddard solvent now have available the product meeting the requirements proposed for use on and after February 10, 1938. The following has been extracted from the Bureau of Standards circular.

On December 2, 1927, at the instance of the National Association of Dyers and Cleaners, a general conference of manufacturers, distributors, and users of Stoddard solvent adopted a recommended commercial standard which was later accepted by the industry and became effective March 1, 1928. The success of the standard and improvements in manufacturing processes during succeeding years led the Standing Committee on January 6 and June 11, 1937, to recommend the revisions which the industry accepted as shown herein for promulgation by the U. S. Department of Commerce through the National Bureau of Standards. The standard is effective for new production from February 10, 1938.

The purpose of this commercial standard is to provide a nationally recognized specification for guidance of producers, distributors, and users of dry cleaning fluid known as Stoddard solvent, and to provide a basis for certification of quality.

OUTLINE SPECIFICATIONS FOR STODDARD SOLVENT

Petroleum distillate. Free from suspended matter and undissolved water.

Color. Min. Saybolt	21
Odor	Sweet
Corrosion test, max. (3 hr. @ 212° F.)	Slight discoloration
Doctor test	Negative
Absorption in sulfuric acid, max. %	5
Flash, closed, min. °F.	100
Distillation:	
50 per cent, ° F. max.	350
90 per cent, °F. max.	375
Residue max. per cent	1.5
Acidity	None

Complete details, together with the methods for inspection, may be found in the reference.

Reference: U. S. Dept. Commerce, National Bureau of Standards, TS-2350, August 10, 1937.

Petroleum as Nitrogen Source for Explosives and Other Compounds

Several press notices have stated that recent discoveries indicate petroleum is a source for explosives and numerous other compounds because of the nitrogen contained in the oil. Do you have any details concerning the subject?—M. C.

Nitrogen is an essential element to all forms of life. It is a constituent of many useful compounds, including explosives and fertilizers. Because of these facts all sources of nitrogen are of value. For many years the most important source of nitrogen was the deposits of nitrates of Chile. The atmosphere known to contain approximately 80 per cent nitrogen was looked upon as a rich potential supply but the methods for extracting it were too expensive until electricity was produced at low cost from water-power. Today, a very large part of the nitrogen of the world is derived from air. These facts are mentioned simply to direct attention to the source of supply.

Nitrogen is not found in the crude oils of the world in large quantities, very seldom do the authorities report an oil to contain so much as 2.5 per cent nitrogen. Gurwitsch-Moore gives an excellent summary of the nitrogen content of petroleum oils. Pennsylvania oil contains only 0.008 per cent, Rumanian oils from 0.09 to 0.12 per cent. An oil from California was found by Mabery to contain 2.35 per cent nitrogen, but other oils from the same state contain much less; for example, 0.477 per cent in Ventura crude oil. Gurwitsch observes that oils free from nitrogen often have a high sulfur content and refers to the statement by Peckham that oils from deep wells were the highest in nitrogen.

The concentration of nitrogen in the high boiling fractions and the residua from petroleum is another matter. Numerous oils will evolve ammonia when heated to between 400° and 500° F., and it has often been observed about stills when reducing to heavy oils and coke. Concentrates and so-called bases which contain very large quantities of nitrogen have been obtained from oil. Gurwitsch reports a base, isolated from Galician oil, containing 17.8 per cent nitrogen. Sodium nitrate, having a nitrogen content of about 16.4 per cent, is available at approximately $22 per ton.

Some toluene, $C_6H_5CH_3$, the aromatic base for the powerful explosive TNT, $C_6H_2CH_3(NO_2)_3$ was made from petroleum during the great war. Under special conditions, as when other supplies may be inadequate for the manufacture of explosives in time of war, some crude oils may be utilized as a source of aromatics. However, under normal conditions, it appears the nitrogen content of petroleum is not high enough and the expense of extraction is too great to consider crude oils, or the residua, as a source of commercial nitrogen.

Reference: Gurwitsch-Moore, Petroleum Technology, page 170.

CHEMICALS FOR THE PETROLEUM INDUSTRY

Phenol

(carbolic acid)

Use—Selective solvent in manufacture of lubricating oils. Special preparations.

Form—Colorless crysfalline solid.

Odor—Characteristic phenol.

Formula—C_6H_5OH.

Specific gravity—1.060.

Melting point, °F.—105.

Boiling point, °F.—360.

LIMITATIONS

Melting point, °F.	104-106
Color	Pure white
Solubility in water	1 part in 15 water complete at 153° F.
Water, max. %	0.2

Carbon Monoxide for Reducing Sulfur in Thiophene Oils

What is the carbon monoxide process for reducing the sulfur percentage of crude oils? This is reported as being suggested for oils especially difficult to refine, such as those containing thiophene.—R. B. P.

Experiments for the desulfurization of oils were conducted by Doctor Cawley, following the work of Malishev, who had reported that carbon monoxide was an effective agent for sulfur removal. Doctor Cawley reports the results obtained with a lubricating oil and a tar oil in several different atmospheres. It appeared that loss of sulfur with carbon monoxide was due to the combination (a) with the iron of the converter to form ferrous sulfide, (b) with the catalyst and (c) with the hydrogen in the oil or its decomposition products.

A second set of experiments were run with a solution of thiophene in toluene containing 0.90 per cent sulfur. This was treated in an atmosphere of carbon monoxide under 100 pounds per square inch in the presence of a catalyst (MoS_3) at 300° C. (572° F.) for four hours. The results with this and other gases are given in the table.

SULFUR CONTENT OF OILS DESULFURIZED WITH CARBON MONOXIDE

Oil treated	Catalyst	Gas used	Sulfur in oil treated, %	Sulfur in product, %
Thiophene in toluene	MoS_3 pellets	CO	0.90	0.07
Thiophene in toluene	None	CO	0.90	0.77
Thiophene in toluene	Molybdenum sulfide supported on alumina gel	CO	0.90	0.53
Thiophene in toluene	MoS_3 pellets	N_2	0.90	0.76
Once-run benzol	MoS_3 pellets	CO	0.88	0.40
Once-run benzol	MoS_3 pellets	N_2	0.88	0.46
Tar oil	MoS_3 pellets	CO	0.63	0.44
Tar oil*	Molybdenum sulfide supported on alumina gel	CO	0.63	0.44
Lubricating oil	MoS_3 pellets	N_2	1.72	1.77

*Taken from the Report of the Fuel Research Board for the year ended March 31, 1936, p. 108, Table 48.

The results obtained by Malishev in the desulfurization with carbon monoxide of a solution of thiophene in toluene were confirmed. At a temperature of 300° C., a pressure of carbon monoxide of 100 pounds per square inch, and in the presence of molybdenum trisulfide, which is an active catalyst for the reaction, the sulfur content of the solution was reduced from 0.90 to 0.07 per cent. Under similar conditions carbon monoxide was, however, not effective for the desulfurization of benzol, low-temperature tar oil or lubricating oil. Some reduction in sulfur could be effected at higher pressures of carbon monoxide, but the extent was still small; for example, at a pressure of carbon monoxide of 1,000 pounds per square inch the sulfur content of a lubricating oil was reduced by only 15 per cent.

According to Malishev, the treatment of organic sulfur compounds with carbon monoxide causes the removal of sulfur as carbon oxysulfide. He found that thiophene, tetramethylthiophene and heptyl sulfide could be desulfurized in this way. From the results given in this paper, however, it would appear that in the present state of our knowledge the reaction is not generally applicable to organic sulfur compounds.

References: B. W. Malishev, J. Inst. Pet. Tech., 22, 341, 1936. C. M. Cawley, same, 23, 209, 1937.

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PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Pipe Line Costs in Canada

Could you tell me the approximate cost of pipe line construction? I have especially in mind a line from Calgary, Alberta, through the mountains to Vancouver, which I presume would be an expensive pipe line to construct. —C. B. K.

The question you asked in your letter is subject to wide interpretation but if it is assumed an 8-inch seamless line will serve your purpose the following rough estimate can be furnished.

Using 8-inch seamless pipe in 40-foot lengths weighing 28.55 pounds per foot the approximate cost of the pipe would be $1.088 per foot f.o.b. Pittsburgh district. The freight and duty will have to be secured by you in Canada.

Construction costs for the bare pipe will be about 36 cents per foot and for coating the pipe it would add about 18 cents per foot. This would bring the total cost, less freight and import duty, to about $8,615 per mile. For right of way and damages add $400 per mile and for engineering and supervision add an additional $200 making the total cost per mile $9,215.

For further information about the design and construction of pipe lines you are referred to the article by W. H. Stueve published in the September 24, 1936. issue of The Oil and Gas Journal, page 88.

Valuation of Settled Production

Could some of your staff enlighten us as to the methods of appraisement used by oil companies in the purchase of new oil well production? We have in mind a method which we believe was based upon a stipulated sum (something around $500) per barrel multiplied by the initial number of barrels produced in 24 hours, however, it would appear that the specific gravity and possibly the acreage of the lease should have some bearing.—S. S. S.

Replying to your letter asking about methods of appraising producing properties the following is quoted from Campbell Osborn's book, "Oil Economics," published by McGraw-Hill Book Co., Inc., New York City.

Under old practice well-settled oil production was sometimes valued by a rule-of-thumb calculation called the "barrel-per-day" method. A more or less arbitrary factor, say of 1,000 for example, was chosen and successively multiplied by the daily production of the property in barrels and the market price of the oil.

In this way a tentative price for the lease was reached. Thus a lease yielding 20 bbls. of oil per day, marketable at $1.50 per barrel, would be valued at $30,000. Since the process depends upon the use of an uncertain factor and fails to give due consideration to the history and condition of the wells, it is considered the least accurate of the methods that have been used. The use of the barrel-per-day process has been largely confined to the older areas where wells yield from 1 to 10 bbls. daily and are considered settled.

Other methods of evaluation explained are the saturation process, use of decline and cumulative-production curves, family and average decline curves, and rate-cumulative and rate-time curves.

For a more modern method of estimating oil and gas reserves you are referred to a paper by D. L. Katz, "A Method for Estimating Oil and Gas Reserves," published in Petroleum Development and Technology (1936), by the American Institute of Mining Engineers, New York City. There are other highly technical methods which require the use of various data and if you are interested in them we will be glad to give you reference to them upon request.

Interpretation of Clause in Deed

Will you please inform me just what the vendor actually reserves for himself in selling the fee to the vendee according to the reservation which reads as follows?:

"This vendor is vested with and specially retains for himself, his heirs and assigns, and reserves from this sale, a perpetual royalty, equal to one-eighth of all minerals, including oil, gas and sulfur, which may be found in, under, upon or beneath the lands hereinabove described, together with perpetual and exclusive rights to make and execute mineral leases on all or any portion of said lands for the exploration, development, production and marketing of any and all of said minerals, and also including perpetual rights of ingress and egress solely for said purpose of exploration, development, production and marketing of said minerals at all times, and likewise the use of so much of the surface of said premises as may be found necessary and convenient for the exploration, development, production and marketing of said minerals which may be found and produced from said premises."

Did the vendor reserve the right to make leases for himself or his agent for the vendee and did the vendor reserve for himself one-eighth of the royalty or one-eighth of all the mineral in place?

After the land concerned was leased and got into production what rights, according to the above reservation, did the vendor and the vendee each have?—R. V. C.

This is a somewhat unusual form of reservation to be attached to a deed for not only does it reserve a one-eighth royalty in all minerals but it reserves to the vendor the right to lease the land for "exploration, development, production and marketing of any and all of said minerals."

This is too involved to offer any explanation without seeing the whole document and it is suggested you take it to an attorney for in the last analysis it is a legal instrument and can best be analyzed by some one versed in the law. You do not state where the land is located which would have some bearing on the interpretation of the clause also.

First Rotary Drilling Bit

Who invented and manufactured the first rotary drilling bit actually used in drilling for oil or gas? Also give the exact date and location of the above-mentioned drilling operation.—C. B. S.

While we cannot give you exact dates and locations the following outline of the development of the rotary drilling outfit may be of some interest to you.

Your question is confined to the first rotary drilling bit and we know of no specific information on this detail, but in the Diamond Jubilee Number of The Oil and Gas Journal, published August 27, 1934, on page 97 there is a statement about the development of the rotary drilling outfit.

The first rotary drilling equipment was built by M. C. and C. E. Baker, water-well drilling contractors of South Dakota, and they brought their outfit to Corsicana, Tex., after 1895, when they drilled some water wells there.

Three well drillers, H. G. Johnston, E. H. Aikin and Charles Rittersbacker, had been drilling water wells in Kansas by cable tool methods and had worked their way to Corsicana where they had contracted to drill a water well for the city. In completing this well oil was discovered, opening the first commercial field in Texas in 1896. These drillers opened a small machine shop to keep their tools in repair and this was the foundation of the American Well & Prospecting Co., and this company is reported to have built the first rotary outfit for Baker brothers when they moved to Corsicana.

The Baker brothers actually started to develop the rotary outfit known as the "jetty" system at Yankton, Dakota Territory, in 1882, and details of this development is given in the article referred to above in the Diamond Jubilee Number. When a bit was attached to the end of the drill pipe is not recorded but one was probably used by the Baker brothers in their experiments.

Locating Gas and Oil in Place

I will appreciate your advising me the source of the information quoted in answer to "G. W. B." on Readers Problems page of The Oil and Gas Journal of September 2 in which it is stated the U.S.S.R. government is now analyzing samples of the subsoil for traces of oil, gases and vapors in mantle rocks. I am under the impression that the gas surveys now being made in the U.S.S.R. are entirely analyses of the underground air pumped out of shallow holes in the mantle rocks, rather than analyses of the subsoil.—E. E. R.

The quotation given in the answer to the question in the September 2 issue of The Oil and Gas Journal was quoted from abstract of a paper by V. A. Sokolov presented before the twelfth International Geological Congress held in Moscow, July 20, 1937.

The opening paragraph of this abstract reads as follows:

"Gas surveying is a new method of geological prospecting. It has been worked out in the Soviet Union and is based upon the determination of the traces of oil gases and vapors in mantle rocks. The apparatus designed for gas survey enables us to determine separately heavy and light fractions of hydrocarbons and other neutral gaseous organic substances contained in the subsoil air. Special gas analytic apparatus applied in gas survey permits us to make the detailed analysis of fractions by consuming, distillation and chemical reactions.

"The sensibility of the apparatus applied in gas survey is 10^{-5} per cent."

You are correct in your understanding of the methods used in U.S.S.R. for the air from holes in the mantle rock is analyzed and not the subsoil samples. This error came about in interpreting the following statement in the abstract:

"The work already carried out has shown that when selecting samples at sufficient depth the presence of vegetable cover and plant remains does not, as a rule, greatly influence the data of gas survey."

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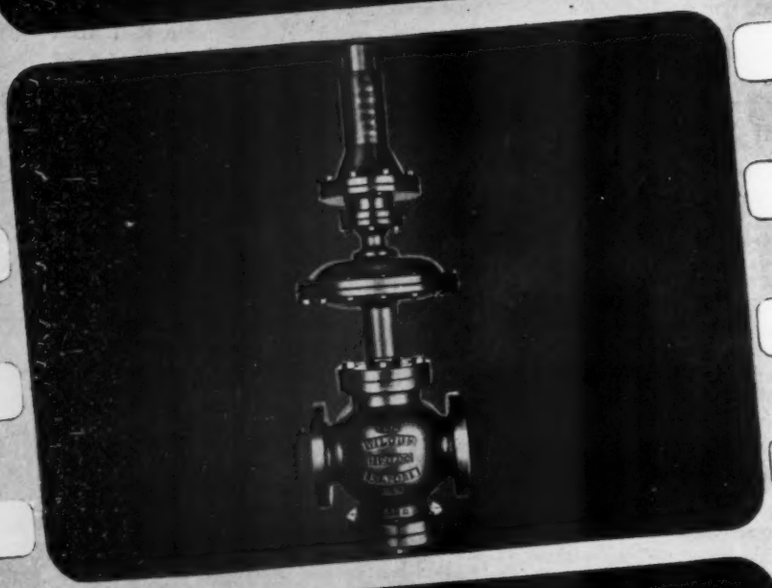

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Owing to its pilot operated construction, it has a much greater actual useable capacity because it can open wide-open if necessary on a very slight steam pressure change.

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2. Pressure loaded. Will not pulsate, surge or override.
3. No stuffing boxes. Almost total absence of friction.
4. Use of Monel Metal in pilot diaphragms prevents corrosion or breaking.
5. Actually controls idling fire or minimum burner pressure instead of merely closing to a fixed minimum opening as in ordinary regulators.
6. Readily adjustable to any desired pressure regardless of fuel supply pressure or of variations in steam pressure.
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FIELD OPERATIONS

Summarizing the Week's Developments

Wildcats that opened new oil producing areas were completed in the deep Milroy area of Stephens County, Oklahoma; near the Red River in southwestern Tillman County; in northern Creek County, and in southwestern Grant County. The fifth wildcat completion of the week opened a new gas area in the Sasakwa district, Hughes County. The Billings pool was extended one-fourth mile northward in section 16-23-2w, Noble County, with a 2,892-bbl. well.

TEXAS

In Newton County, Texas Coastal district, the discovery well on the Conroe trend tested 800 bbls. of fluid, two-thirds of which was said to have been oil. In Southwest Texas the second test on the Lamar Peninsula in Aransas County is flowing 70 bbls. of distillate per day with 5,000,000 feet of gas. The Stratton pool in Nueces County appears to have been extended into Kleberg County if a distillate showing in Camp Production Co.'s test is a criterion. A number of wildcats reported showings. The second Opelika test in Henderson County, Eastern Texas is down 9,095 feet with no production. It will be drilled to 10,000 feet unless it produces commercially above that depth. In Hockley County, West Texas, a test 2½ miles southeast of Hockley's only pool started off at 432 bbls. a day. One test in Terry County, south of Hockley, is dry and another shut down with no oil at 5,340 feet. The McCamey field was extended another half mile.

LA-TEX-ARK

The deep well in Schuler, Arkansas, pool, producing from pay at 7,554-71 feet, tested 2,480 bbls. of 32.6-gravity oil in 24 hours. The 13 producing wells in the Arkansas end of the Rodessa field were permitted to produce an average of 338 bbls. per day per well in the past week while wells in Louisiana and Texas were more severely curtailed. In southern Louisiana a new pool was opened with a 679-bbl. well in Acadia Parish, and a shallow oil pool was opened in Plaquemines Parish with a 25-bbl. well from pay topped at 688 feet. The discovery well in the Cook Mountain horizon in Evangeline Parish flowed 265 bbls. of 52.4-gravity oil in 24 hours.

KANSAS

A wildcat in southern Lyon County, Kansas, was completed as a small producer. The Ainsworth pool extensioner in section 27-16-13w, Barton County, was completed for 1,722 bbls. of oil daily. A Bartlesville sand well started at 949 bbls. of oil daily in section 15-35-2e, Sumner County, near the Oklahoma line. A Barton County outpost in section 13-16-14w, gave indications of opening a new pool. The Shutts pool, Ellis County, was extended one-half mile northeast.

NEW MEXICO

The old Vacuum area of central Lea County, New Mexico, assumed importance with a one-half mile southwest extension well in section 14-17-34, which flowed 582 bbls. of oil in 24 hours with tools in the hole. Fourteen completions in Lea County included a potentially 20,000-bbl. well in the South Eunice field.

COLORADO

The Gramps No 1 pool in Archuleta County, Colorado, was defined to the northwest and a deep wildcat dry hole in Bent County, eastern Colorado, was dry and abandoned at 5,651 feet.

ILLINOIS

Along with 10 completed oil wells in the southern Illinois pools a number of dry holes were reported, the most significant being a deep test in Perry County which opened salt and sulfur water in the St. Peter sand, (the Wilcox sand of Oklahoma).

Completions in All Fields

(Week Ending September 25, 1937)

	Oil	Gas	Dry	Total	1937 total comp. to date	1936 total comp. to date
N. Y., Pa., W. Va.	77	26	12	115	3,223	2,695
Ohio	10	16	6	32	882	566
Indiana	0	0	0	0	70	142
Kentucky	16	1	9	26	454	215
Illinois	10	0	5	15	143	31
Michigan	5	0	2	7	571	614
Kansas	43	2	13	58	1,903	1,206
Oklahoma	43	3	9	55	2,047	1,942
Texas:						
North Central Texas	40	0	31	71	2,107	1,992
West Texas	56	0	3	59	1,999	1,128
Texas Panhandle	13	4	0	17	555	485
East Texas	60	0	7	67	1,723	1,944
East Central Texas	15	0	3	18	524	256
East Texas Border	2	0	0	2	268	77
Gulf Coast Texas	21	2	9	32	1,136	914
Southwest Texas	43	3	20	66	2,434	2,091
Total Texas	250	9	73	332	10,746	8,887
North Louisiana	11	1	2	14	481	495
Gulf Coast Louisiana	7	1	5	13	339	376
Total Louisiana	18	2	7	27	820	871
Arkansas	4	0	0	4	112	69
Montana	2	2	0	4	163	177
Wyoming	0	0	1	1	82	83
Colorado	1	0	3	4	16	21
New Mexico	14	0	4	18	556	425
Utah	0	0	0	0	2	5
California	15	0	7	22	1,112	849
Total United States	508	61	151	720	22,902	18,798
Total previous week	483	45	122	650		
Difference	25	16	29	70		

Outstanding Fields—Highlights

(Week Ending September 25, 1937)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Hastings	4	21	5	2,978	307	19,879
McCampbell	3	14	3	760	52	3,850
Saxet	5	21	5	740	542	44,100
Benavides	3	17	4	480	58	4,980
East Texas	61	114	60	2,837	23,624	482,000
Talco	0	32	12	2,560	481	31,297
Ector County	18	97	12	11,474	628	29,900
Winkler County	8	46	13	11,145	1,428	44,400
OKLAHOMA						
Fitts	5	29	8	4,253	875	79,725
Billings	1	8	3	3,030	49	8,200
KANSAS						
Ellis County	6	48	3	3,555	201	8,390
Reno County	4	14	2	1,647	479	18,145
Russell County	8	65	10	5,118	861	36,675
Rice County	4	47	5	3,040	980	42,550
NEW MEXICO						
Lea County	12	114	14	2,792	1,489	106,450
TEX-LA-ARK AREA						
Rodessa, Ark.	2	24	3	1,200	13	4,405
Rodessa, La.	0	10	3	545	411	50,943
Rodessa, Tex.	2	21	2	400	349	32,935
Lisbon, La.	2	24	6	6,005	117	13,607
MICHIGAN						
Buckeye	12	65	7	2,875	229	22,858
CALIFORNIA						
Wilmington	6	27	6	1,764	61	58,750
ILLINOIS						
Central Illinois	29	101	10	3,177	120	17,990

Southwest Texas District

By GEORGE WEBER

LAMAR PENINSULA, ARANSAS COUNTY, SHOWS PRODUCTION

HOUSTON, Tex., Sept. 27.—The opening of a new gas area, the extension of several important fields and numerous showings in scattered wildcats featured developments of Southwest Texas during the past week. Activity throughout the big district seems to be steadily gaining, and the recent allowable cut, which affected several of the larger lower Gulf Coastal fields, is not expected to seriously affect drilling.

Leasing of large tracts diverted attention somewhat from the usual areas and focused it particularly on the lower coast, where one company leased 7,000 acres in Kleberg and Kenedy counties in the region of Baffins Bay. In addition, leases made by a number of oil companies in the submerged land at Flour Bluff have netted the state of Texas more than $3,000,000, including $272,820 in cash bonuses, $2,740,640 out of oil production and, in addition, one-eighth royalties. The leases were located in Laguna Madre, which lies between Mustang and Padre Islands and the mainland, and borders the rich Flour Bluff field of southeastern Nueces County.

Aransas County took the spotlight during the week with the completion of the Barnsdall Oil Co. No. 2 Edwards. The Lamar Peninsula has been the center of considerable interest since last December, when the Barnsdall Oil Co. spudded in No. 1 Edwards. That test, bottomed at 7,996 feet, blew out and ran wild in February, cratering, but not catching afire. The blowout brought up gas, distillate and some oil before the well finally flowed salt water and "went dead."

No. 2 Edwards was begun in an offset position in mid-February, and has been drilling and testing the various deep gas horizons since. Bottomed at 9,785 feet, it was plugged back successively and perforated at 8,012-30 feet and 7,502-30 feet, the latter being the present producing depth. The test is flowing through a separator, making approximately 70 bbls. of distillate per day together with 5,000,000 feet of gas. Working pressure on the tubing is from 1,200 to 1,300 pounds and casing pressure is 2,700 pounds. The gauge was taken on a three-eighths inch choke. No further development of the area is planned for the immediate future by Barnsdall Oil Co.

New Wells in McCampbell

To the southwest in the same county, the McCampbell field is the center of the activity. New producers were brought in in the field during the past week, and one deep test and a reported important showing of a new sand on the eastern edge combine to attract considerable attention to operations in McCampbell.

Nueces County activity was strong during the week, but little of outstanding importance occurred.

The Flour Bluff field in the southeastern part of the state gained one good producer. Submerged land which was leased recently from the state will receive development shortly, it is expected, with the close of the hurricane season.

In the Luby field, the Seaboard Oil Corp. No. 1 Shaefer was completed for a good producer. An east offset to the No. 1 Luby discovery well of the field, the Shaefer well tested a new sand at 6,826-54 feet. The horizon tested only gas, however, and after plugging back from a total depth of 7,234 feet, operators completed the well for an initial production of 486 bbls. per day in the field sand at 5,058-62 feet.

Five Completions in Saxet

Saxet gained five new producers, completed in the 4,400 and 4,500-foot Clarkwood sands and the deeper Frio sands below 6,000 feet. One test was abandoned. The Southern Minerals Corp. No. 21 Bliss blew out over two weeks ago when attempting to set surface casing at 1,114 feet. The Saxet field is underlain with shallow gas sands which have been charged with high-pressure gas by old cratered wells in the early history of the field. The presence of those sands is the reason for the policy of setting two strings of surface casing, the second of which Southern Minerals was setting when the well blew out.

An important field extension is seen as a possibility in the Stratton field of extreme southwestern Nueces County. The Camp Production Co. No. 1-A Wardner, located in section 18, 900 feet north of the Kleberg County line, recovered 40 feet of distillate in four and one-half minutes at 6,476-82 feet. The test was made at a working pressure of 400 pounds. Operators were last reported coring below 6,505 feet still in sand section. The test is located 1 mile southwest of production in the Stratton field.

To the west in Jim Wells County, the deep test, Magnolia Petroleum Co. No. 7 Seeligson, is again making hole. The wildcat blew out and caught fire early in August while operators were coring at 6,500 feet. Protective casing set in the hole at 6,160 feet prevented the test from cratering, and after the well was killed and the hole cleaned, a new rig was moved on. At latest reports the test was coring at 6,547 feet.

The Laredo district is showing weekly gains in activity. At present, the greatest development is taking place in the southeastern section of Webb County. Two new fields, Killam and Oilton, are receiving considerable play, with a number of drilling tests in each field, and in addition, wildcats being drilled in outpost positions. Five oil wells and one gasser were completed in the area during the week.

Three miles south of the Killam field, the French Oil Corp. is rigging up on No. 1 Benavides in section 704. One mile east of the field, the same operators are drilling No. 4 Garcia. One mile west of Killam, Highland Oil Co. has staked location for No. 1 Garcia & Villareal.

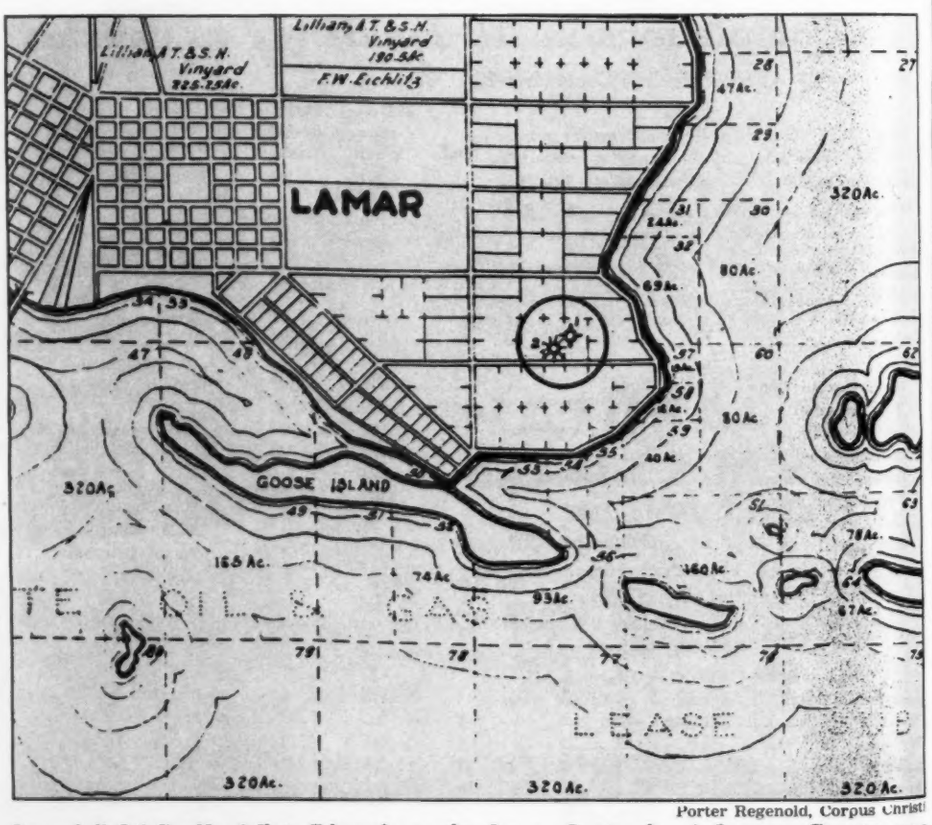
A fourth wildcat in the area, Adams & LeFevre No. 1 Garcia, has encountered shows of production. Located 4½ miles south of the Oilton field, the No. 1 Garcia recovered 75 feet of fluid, of which 40 per cent was oil and 60 per cent drilling mud, from sand at 1,856-66 feet. The testing tool was opened for 26 minutes. Operators are now coring deeper at 2,005 feet.

Duval County activity is divided among several wildcats and drilling tests in the Benavides, Hoffman, Labbe and Seven Sisters fields.

The mile eastern extension to the Benavides field, which has been reworked for several weeks, was placed on production making 112 bbls. per day, jetting. Benavides is the most active spot in the Laredo district, with 20 wells drilling in the field, and new locations still exceeding completions.

McMullen and Live Oak counties came in for some attention during the week with a wildcat showing and a

(Continued on Page 83)

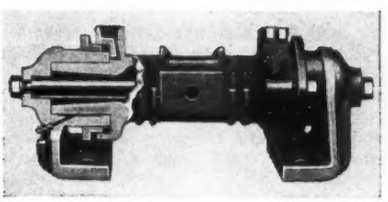


Porter Regenold, Corpus Christi

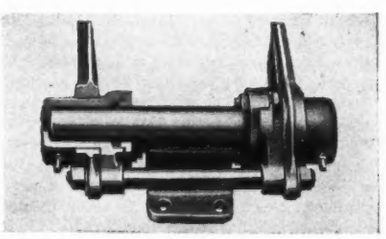
Barnsdall Oil Co. No. 2 Kate Edwards, on the Lamar Peninsula of Aransas County, was completed for a wet gasser. No. 2 opens the area to initial production of gas and distillate. No further operations are planned by Barnsdall in the vicinity for the present. The No. 2 Edwards, one of the deepest tests in South Texas, is bottomed at 9,785 feet and is producing at 7,500 feet

PROGRESS

Yesterday and Today



This saddle bearing, a stuffing box packing gland type, is dirt and dust proof. These bearings are large, giving enough projected bearing area to incorporate an adequate safety factor. These bearings are furnished in three types.



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Eastern Field Report

By STAFF CORRESPONDENT

WESTMORELAND'S 7,722-FOOT TEST A FAILURE IN ORISKANY

PITTSBURGH, Pa., Sept. 27.—The deep test of the Potter Development Co., William E. Snee and others on the Indiana Savings & Trust Co. lease on the Laurel Ridge dome, in Fairfield Township, Westmoreland County, Pennsylvania, after bright hopes were raised with the gas in the Onondaga lime, proved a failure in the Oriskany sand. Oriskany sand was topped at 7,720 feet and at 7,722 feet salt water rose in the hole and the bailer was unable to make headway against it.

This was the completion of an old test started about 1923. After reaching a depth of 6,761 feet, it was abandoned by the original operators. Late in 1936, the present operators rebuilt the rig and ran in to find the hole in good shape down to 6,731 feet. The top of the Onondaga was struck at 7,578 feet with a good showing of gas at 7,597 feet. The hole was then cased with a string of 7,600 feet. Additional gas was found in the Onondaga with the gauge once reading over 700,000 feet. A small amount of heavy salt water was found in one of the fractures with additional gas below it.

The test is located on the top of the Laurel Ridge dome about 1.4 miles south 47 degrees west of the intersection of Cambria, Somerset and Westmoreland counties and is the first well on record in that part of the structure to reach the Lower Devonian. On Chestnut Ridge, these operators have a paying gas well on the Summit Hotel property in South Union Township, Fayette County, which was bottomed in the Onondaga at 6,667½ feet and never reached the Oriskany.

SOUTHEAST OHIO

In southeast Ohio Pure Oil Co. No. 14 G. W. Crawford, section 25, Pike Township, Coshocton County, was bottomed in the Clinton sand at 3,152 feet and while not shot has the appearance of a 75-bbl. producer.

In Knox County Preston Oil Co. completed No. 2 Lloyd Bailey in section 10, Jackson Township, in Clinton sand at 3,180 feet. It produced 65 bbls. the first day after shot.

In Athens County, C. W. Nuzum and others completed No. 2 James Rogeski, near Cananville, in section 12, Lodi Township, in Berea sand at 1,645 feet. It is a small gas well with no showing of oil. In section 13, Ames Township, Carpenter and Glazier No. 18 John Smith drilled through the Cow Run sand at 265 feet. It was dry.

In Cuyahoga County, W. Shear and others completed a test on Whiskey Island on the lake front in the city of Cleveland, in Newburg sand, below the Oriskany, and is a gas well gauging 78,000 feet a day.

In Hocking County, Kachelmacher Estate drilled No. 5 Nelsonville Coal & Land Co., section 19, Ward Township, through Cinnamon sand to 2,037 feet. It was a dry hole.

In Holmes County, David Shafer drilled a dry hole on the Martin Loguilion farm in section 18, Monroe Township, through Clinton sand to 3,596 feet.

In Licking County, North Fork Oil Co. No. 10 John G. Williams in section 3, Hanover Township, was completed in Berea sand at 775 feet and it produced 7 bbls. the first day after shot. In Newton Township, the Park National Bank No. 10 Newark, Ohio, completed a test on the Harry Gleckner farm, Lot 1, in the Berea sand at 753 feet. It is estimated as a 2-bbl. pumper.

In Morgan County, G. E. Morris and others No. 4 W. C. and Daisy Harker, 1 mile west of Dale, Lot 1,097, Windsor Township, was completed in Peeker sand at 503 feet. It produced 2 bbls. the first day after shot. One-half mile southwest of Todds in section 11, Marion Township, the Fairmont Gas Co. drilled No. 2 R. B. Piermont through the Salt sand to 870 feet. It had a showing of 20,000 feet of gas but was abandoned.

In Washington County, Lester Swingle and others drilled No. 4 J. D. Murdock, Lot 1,077, Palmer Township, through the Cow Run sand to 571 feet. It was dry. These operators completed No. 5 on the same lease at 575 feet and it produced 2 bbls. the first day before shot. On Lot 1,073, Helen J. Burt and others completed No. 3 Mattie A. Lightner in first Cow Run at 495 feet. It produced 2 bbls. the first day after shot.

One-quarter mile south of Vincent in section 19, Barlow Township, Washington County, McTaggart and others No. 6 D. W. McFarland farm was completed in first Berea at 1,902 feet. It is a gas well gauging 100,000 feet a day. At Cossetts Fork in section 19, Liberty Township, S. S. Stewart and others completed No. 10 James R. Heslop in the second Cow Run at 1,065 feet with a flow of gas gauged at 100,000 feet a day. In Aurelius Township, section 21, E. W. Cline drilled No. 17 Coal Lands through Berea grit to 1,663 feet and after standing there was no showing of commercial production. In Wesley Township, in section 26, H. B. Walker, Trustee drilled No. 44 John Sheets through Mercer sand, 140 feet, and it was dry.

In Columbiana County, the Natural Gas Co. of West Virginia is drilling at 5,800 feet in the deep test on the D. Deseliem farm in section 26, Wayne Township. This will be an interesting test as it is the first in that section to reach for the Clinton sand.

SOUTHWEST PENNSYLVANIA

The test of the Carnegie Natural Gas Co. on the W. A. Currie farm in Shenango Township, Lawrence County, reached the top of the Oriskany sand at 4,634 feet and at 3 feet in it there was no showing of gas. In this company's test on the Heickel farm the gas was struck in small quantities 5 feet in the sand. The Currie test, with an elevation on the surface of 1,202 feet, shows subsea to the top of the Oriskany 3,432 feet. The Heickel test, with a surface elevation of 1,240 feet, has a subsea Oriskany depth of 3,491 feet, putting the new test 59 feet up structure. Also the Onondaga was 9 feet thicker in the new test.

The deep test of the South Penn Oil Co. on the Christian Z. Schove farm in Hampton Township, Allegheny County, reached 6,238 feet and struck the first gas blowout in the Shales. The top of the Tully lime was at 7,594 feet. Due to the gas blow the hole caved on top of the tools and 140 feet of line and cavings are now being fished out.

The well offers something of a record for cable drilling. The depth was reached in 78 elapsed days from the start of the spud and the usual hard lime and sand sections were hard going. No serious fishing job was met until the present one and the hole is uncased below 1,600 feet. The contractor is Charles L. Sample, with a drilling crew of Joe Schmitt, C. A. Smith, Frank Montag, drillers, and C. R. Evans, Charles Hager and Ray Turner, tool dressers.

In Washington County, the test of Norwood P. Johnston and others on the James McNurney farm near Hickory in Mount Pleasant Township, Washington County, has cleaned out the cavings to bottom, 6,428 feet, and may lower the casing after underreaming to bottom.

Completions

One small producer, three gas wells, and two dry holes were reported in Southwest Pennsylvania during the week. In Greene County, the Union Gasoline & Oil Corp. completed deepening No. 3 T. M. Galentine, in Aleppo Township, to 3,530 feet. The Fifth sand was at 3,513-21 feet with about 2 bbls. a day at 3,517-20 feet.

In Gilmore Township, Greene County, the Duquesne Gas Corp. completed a test on the T. M. Hennen farm in the Bayard sand at a depth of 3,450 feet. It is a gas well gauging 478,000 feet a day. In Freeport Boro, Null & Milliken deepened No. 3 W. P. Hoskinson through the Fifth sand to 3,278 feet and it was dry.

In Franklin Township, Greene County, the Waynesburg Home Gas Co. deepened the test on the Marguerite Grover farm to 4,022 feet through the Bayard sand with nothing underlying. They will save the 55,000 feet of gas in that formation.

In Washington County, the Keystone Gas Co. completed a test on the John Means farm in South Strabane Township as a gas well at 1,338 feet. The gas sand was at 1,316-38 feet, with 500,000 feet of gas at 1,332-38 feet. In this township, the Manufacturers Light & Heat Co. drilled a test on the Robert O. McKahan farm and it was a dry hole to 2,947 feet.

Greene County Drilling

In Center Township, the Carnegie Natural Gas Co. started drilling in No. 2 J. H. Orndoff, but the cement above the Nineveh Thirty-foot did not hold and it is being recemented. The Union Gasoline & Oil Corp. is drilling in the Thirty-foot pay in the Braddock & Cook No. 4. The Carnegie Natural Gas Co. is spudding in the J. W. Milliken No. 3. Charles Mong and others are moving in for a second test on the J. L. Metz (Weir) farm.

In Morris Township, William Smith and others are rigging up a test on the Phillip Fonner heirs. In Washington Township, Carnegie Natural Gas Co. is down 2,163 feet on the Sadie A. Connors farm. Charles Mong has a rig standing for No. 2 Jacob Johns. The Equitable Gas Co. has completed the rig on the Pratt Yeager farm.

In Richhill Township, Smith McCracken is drilling at 1,020 feet on the Asa Hughes test. O. I. Dille is shut down cementing at 1,085 feet on the J. M. Phillips farm. In Springhill Township, Nelson M. Richard Co. is down 1,960 feet on the Rossell Sammons farm. In Dunkard Township, the Convex Glass Co. is drilling at 1,165 feet on the Van Voorhis farm. In Monongahela Township, Fred Garrison is drilling at 1,886 feet on the Stoneking farm with about 73,000 feet of gas at 1,876 feet.

Washington County

In Amwell Township, the Carnegie Natural Gas Co. has the rig up for No. 4 N. B. Redd. The Union Gasoline & Oil Corp. is down 2,970 feet on the No. 7 A. O. Vankirk and 1,150 feet in No. 8. In South Franklin Township, the Dunn Mar Oil & Gas Co. is ready to spud the No. 4 J. T. Baldwin. The South Penn Oil Co. is drilling at 1,125 feet in No. 2 Piedmont Coal Co.

In North Strabane Township, the Keystone Gas Co. is spudding a test on the H. H. Beabout farm. In Peters Township, the Carnegie Natural Gas Co. is down 2,402 feet on the W. J. McMurray farm and running casing. In Nottingham Township, Robinson Brothers are drilling at 2,330 feet on the Frank Anthony farm. In North Strabane Township, McClelland Brothers are at 2,489 feet on their own property.

WEST VIRGINIA

Several small producers were completed in West Virginia during the week. In Calhoun County, F. F. McIntosh completed No. 3 Seymore Settles in Sherman district. The Big Injun was at 1,913-35 feet; gas, 1,913 feet; Weir, 2,085-95 feet; gas, 2,085-95 feet; Berea, 2,263-78 feet; oil, 2,263-78 feet. The gas gauges 150,000 feet a day and the oil about 3 bbls. a day. In Sheridan district, the Great Elk Oil Co. completed No. 34 Samuel Bauchman in the Salt sand at 1,876 feet and it is good for 5 bbls. a day.

In Hancock County, W. J. Hudson completed a test on the Cable Brice farm in Butler district in Berea sand at a depth of 970 feet. It is starting off at 5 bbls. daily.

In Marion County, the Victor Oil Co. reclaimed the old No. 2 J. T. Talkington in Lincoln district and it is now showing from 3 to 5 bbls. a day from the Big Injun sand at a depth of 1,950 feet.

In Pleasants County, Locke Brothers completed a test on the W. A. Locke farm in Lafayette district in the Maxton sand at 1,600 feet and it is good for 2 bbls. a day and 5,000 feet of gas. Neely & Morrison drilled a

(Continued on Page 90)

Kansas Developments

By
DAL DALRYMPLE

BARTON OUTPOST CORES OIL; EXTENSION IN SHUTTS AREA

The opening of a new producing area in northern Barton County was indicated at Shell Petroleum Corp. No. 1 Peterman, SE NE SE section 13-16-14w, which found saturation in five cores of Siliceous lime and Dolomite from 3,341 feet to 3,366 feet, total depth. Operators were waiting on cement after setting 4¾-inch casing at 3,342 feet. It was due to be tested this week. Nearest production is 1¼ miles northeast in the McClanahan, or South Trapp area.

McPherson Drilling Co. No. 1 Bemis, SE SE SW section 33-11-17w, half-mile northeast extension of the Shutts pool, Ellis County, flowed 390 bbls. of oil in eight hours after acidizing. It topped Siliceous lime at 3,611 feet, total depth 3,621½ feet.

Possibility for a new oil pool in Barber County was seen at W. I. Southern, Inc., and others No. 3 Davis, SE SE NE section 24-34-15w, in the Aetna gas district. A show of oil was reported in Viola lime and operators were preparing to shoot at 5,394 feet, total depth.

Texas Co. No. 1 Deines, SW cor. section 19-13-14w, was showing as a half-mile north extension of Siliceous lime production in the Atherton pool, Russell County. At total depth of 3,257 feet, oil rose 80 feet in the hole in 30 minutes after drilling cement plugs in 5-inch casing set at 3,251 feet.

Wildcat Completions

Only one of six wildcats completed in Kansas the past week found production, as compared with the remarkable record of the previous week when seven of nine wildcats completed were producers.

The single wildcat producer to be completed the past week was Arthur Sory No. 1 Byrd, SW SW SE section 32-21-11, in southern Lyon County, southeast of the Bradfield pool. It found Bartlesville sand at 1,853 feet and was bottomed at 1,914 feet. It pumped 45 bbls. of oil and 45 bbls. of water in 24 hours, and was completed pumping at the rate of 25 bbls. of oil and 25 bbls. of water daily. Gravity of the oil was 39 degrees.

Vickers Petroleum Co. No. 1 Lucas, NW NW NE section 16-17-14w, wildcat northwest of Hoisington in Barton County, topped Siliceous lime at 3,457 feet, had a hole full of water at 3,470-82 feet, total depth, and was abandoned.

E. J. Shaffer No. 1 Spencer, NW NW SW section 3-25-14w, Stafford County wildcat, was dry and abandoned in Siliceous lime at 4,344 feet, total depth.

Equity Gas Co. and others No. 1 Razac, NE NE SE section 31-15-10w, wildcat in western Ellsworth County, topped Siliceous lime at 3,253 feet, had a hole full of water at 3,265-70 feet, total depth, and was abandoned.

Ward McGinniss and associates No. 1 Smith & Jobes, NW NW SE section 10-24-13, Greenwood County wildcat, failed to find production in commercial quantities and was abandoned at 1,633 feet, total depth. Top of Mississippi lime was 1,610 feet.

Douglas & Gear No. 1 Meade, SE SE NW section 33-25-16w, Edwards County outpost, topped Kansas City lime at 3,915 feet, Conglomerate 4,380 feet, Viola lime 4,505 feet, Siliceous lime 4,768 feet, had no shows of oil and was dry and abandoned at 4,798 feet, total depth.

R. E. Parrish No. 1 Pizzel, NE NE SE section 18-6s-42w, Sherman County wildcat, was reported as an abandoned rig.

Barton County

Stanolind Oil & Gas Co. No. 2 Kowalsky, NW SW NE section 11-20-11w, in the Kowalsky area between the Silica and Ellinwood pools, Barton County, made potential of 2,170 bbls. of oil and was completed at 3,287 feet, total depth. Production was from Siliceous lime topped at 3,279 feet.

In the Peter pool, Indian Territory Illuminating Oil Co. No. 5 Peter, C S half S half NW section 24-20-11w, found Siliceous lime at 3,246 feet, was bottomed at 3,256 feet, flowed and pumped 204 bbls. of oil in four hours and made potential of 1,159 bbls. of oil.

Stanolind Oil & Gas Co. No. 2 Panning, NW NW SE section 2-20-11w, west extension of the Silica field, was completed for potential of 1,952 bbls. of oil at 3,292 feet, total depth. Siliceous lime was found at 3,281 feet.

Stanolind Oil & Gas Co. No. 1 Carl Schmidt, SW SW SE section 35-19-11w, topped Siliceous lime at 3,290 feet, was bottomed at 3,330 feet and made potential of 271 bbls. of oil.

In the Kraft area, C. L. Price and associates completed No. 2 Kraft, NW NW NE section 10-17-11w, at total depth of 3,281 feet for potential of 2,369 bbls. of oil. It pumped 394 bbls. of oil in the first four hours of potential test and 407 bbls. in the next four hours. Siliceous lime was found at 3,275 feet.

Shell Petroleum Corp. No. 1 Kroutwurst, SE NE NW section 10-17-11w, had Siliceous lime at 3,294 feet, total depth 3,304 feet, swabbed 524 bbls. of oil in seven hours and pumped 378 bbls. in the first four hours of potential test, making potential of 2,205 bbls.

An extensioner to the Ainsworth pool was completed at Stanolind Oil & Gas Co. No. 1 Thorne, SW SW SE section 27-16-13w. It had Siliceous lime at 3,393 feet and was bottomed at 3,397 feet. After acid treatment, it made potential of 1,722 bbls. of oil.

A failure also was registered in the Ainsworth area at Continental Oil Co. No. 7 Ainsworth A, SW NE NE section 33-16-13w. It had Siliceous lime at 3,418 feet, drill stem test indicated salt water and it was completed for a salt water disposal well at 3,744 feet, total depth. It is offset by producers on the east, southeast and south.

Sinclair Prairie Oil Co. No. 1 Hoffman, SE SE NE section 7-16-13w, had Siliceous lime at 3,367 feet, total depth 3,377 feet, pumped 400 bbls. of oil in 15 hours, was acidized, pumped 133 bbls. in the first four hours of potential test, 125 bbls. the next four hours and made potential of 994 bbls. It is a north offset to the discovery well in the McClanahan area, far south extensioner of the Trapp field.

Polk & Fortson No. 2 Meyers, SW NW SE section 16-16-12w, in the Beaver area, found Conglomerate at 3,335 feet and was bottomed at 3,347 feet. It swabbed 101 bbls. of oil in the first four hours, 104 bbls. in the next four hours and made potential of 455 bbls.

Ohio Oil Co. No. 1 Kuhlman, SE cor. section 16-18-15w, was an abandoned location in the Albert-Otis district.

Another well was near completion in the McClanahan extension area at T. C. Johnson No. 1 Bitter, NW NW SW section 8-16-13w, east offset to the discovery well. It topped Siliceous lime at 3,360 feet, total depth 3,371 feet, and pumped 470 bbls. of oil in six hours.

A near completion in the Susank pool was Ohio Oil Co. No. 2 Kramer, C W half W half SE section 9-16-13w. It topped Siliceous lime at 3,386 feet, total depth 3,393 feet, oil rose 1,000 feet in the hole in 3½ hours, it was acidized and was waiting.

Indian Territory Illuminating Oil Co. No. 3 Schrepel A, SE NE NE section 26-20-11w, had Siliceous lime at 3,260 feet, total depth 3,290 feet, and swabbed 289 bbls. of oil in eight hours but was not completed.

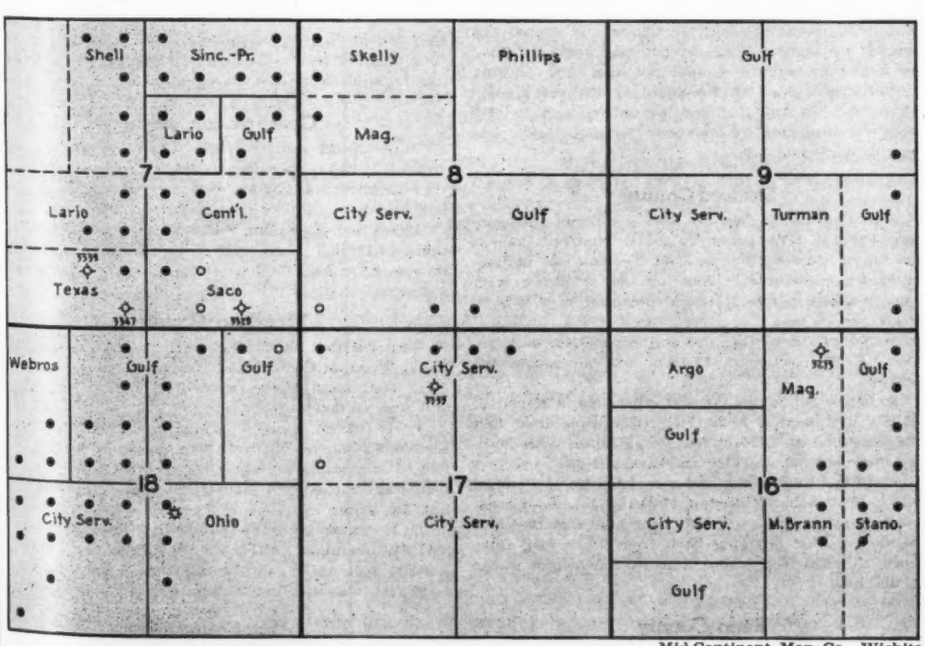
Russell County

Ten oil wells were completed in Russell County the past week.

Coralena Oil Co. No. 4 Hank Sellens, SW NE NW section 30-15-13w, Trapp field, had Siliceous lime at 3,289-91 feet, total depth, pumped 534 bbls. of oil in four hours and made potential of 3,206 bbls.

Coralena Oil Co. No. 30 Sellens heirs B, SW NW NW section 30-15-13w, topped Siliceous lime at 3,295 feet, total depth 3,296 feet, pumped 495 bbls. of oil in the first four hours, 498 bbls. the next four hours and made potential of 2,971 bbls.

Phillips Petroleum Co. No. 15 Hoffman, SW SE SE section 31-15-13w, swabbed 300 bbls. of oil in 10



Mid-Continent Map Co., Wichita

Several new tests were being started at southeast end of Chase pool, following completion of producer in NW cor. section 17-20-9w, that may link Chase and Empire pools

hours, was acidized with 4,000 gallons, pumped 525 bbls. in the first four hours of potential test 549 bbls. the next four hours and made potential of 3,139 bbls. Top of Siliceous lime was 3,328 feet, total depth 3,333 feet.

Coralena Oil Co. No. 3 George Sellens, SW SE SW section 20-15-13w, had Siliceous lime at 3,294-3,300 feet, total depth, was acidized two times and pumped 233 bbls. of oil the first four hours, 240 bbls. the next four hours and made potential of 1,202 bbls.

W. I. Southern, Inc., No. 3 L. Sellens A, SE SE SW section 26-15-13w, found Siliceous lime at 3,330 feet, was bottomed at 3,336 feet, plugged back to 3,333 feet and made potential of 72 bbls. of oil.

Cities Service Oil Co. No. 1 Krug D, SW SW SE section 24-15-14w, had Siliceous lime at 3,327-33 feet, total depth, was acidized and made potential of 1,104 bbls. of oil.

Cities Service Oil Co. and others No. 3 Mai, NE SE SW section 24-15-14w, topped Siliceous lime at 3,345 feet, total depth 3,352 feet, was acidized, pumped 114 bbls. of oil the first four hours, 67 bbls. the next four hours and gained potential rating of 407 bbls. of oil, with 26 per cent water.

Cities Service Oil Co. No. 11 Boomhower, SE NW NE section 25-15-14w, pumped 350 bbls. of oil the first four hours after acid treatment, 386 bbls. the next four hours and made potential of 2,105 bbls Top of Siliceous lime was 3,320 feet, total depth 3,325 feet.

Same company's No. 10 Boomhower, SE SW NE section 25-15-14w, had Siliceous lime at 3,324-25 feet, total depth, was treated with acid, pumped 305 bbls. of oil the first four hours, 316 bbls. the next four hours and made potential of 1,833 bbls.

National Refining Co. No. 2 Reinhardt D, NW NE NE section 19-14-14w, had Kansas City lime at 3,035 feet, total depth 3,075 feet, and made potential of 1,611 bbls. of oil.

Transwestern Oil Co. No. 8 Helen Polcyn SW SE SE section 10-14-15w, was an abandoned location.

Skelly Oil Co. and 3 Rein, Jr., SE NE SW section 8-15-13w, was bottomed at 3,172 feet and 3,000 feet of oil rose in the hole in one hour but it had not been tested.

Phillips Petroleum Co. No. 16 Hoffman, SE cor. section 31-15-13w, topped Siliceous lime at 3,342 feet, total depth 3,361 feet, swabbed 70 bbls. of oil an hour, and was acidized but had not been tested.

Cities Service Oil Co. and others No. 4 Bender A, NE SE NW section 25-15-14w, was waiting to test after acidizing with 2,000 gallons. It had Siliceous lime at 3,328 feet, total depth 3,332 feet, and 2,100 feet of oil rose in the hole in 18 hours.

Ellis County

Deep Rock Oil Corp. No. 19 Baumer, NE SE NW section 27-11-17w, Bemis field, Ellis County, had Siliceous lime at 3,528-42 feet, total depth, and made potential of 3,370 bbls. of oil.

Margay Oil Co. No. 1 Bemis D, NE NE SE section 28-11-17w, found Siliceous lime at 3,613 feet, was bottomed at 3,621 feet and completed as a 15-bbl. minimum well.

In the Marshall area, Lario Oil & Gas Co. No. 5 Marshall, SE SE SW section 31-11-17w, found Siliceous lime at 3,620 feet, total depth 3,637 feet, was acidized three times, swabbed 170 bbls. of oil in two hours and gained potential rating of 2,023 bbls. of oil. Total acid was 4,500 gallons.

Amerada Petroleum Corp. No. 2 Edith Shutts, NW NW NE section 6-12-17w, had Siliceous lime at 3,720 feet and was dry and abandoned at 3,788 feet, total depth.

Cities Service Oil Co. No. 11 Bemis, NE SW SE section 21-11-17w, was a near completion in the Bemis field. It found Siliceous lime at 3,367 feet, was bottomed at 3,376 feet and had 3,100 feet of oil in the hole.

Magnolia Petroleum Co. No. 3 Johansen, SW SW NE section 22-11-17w, found Siliceous lime at 3,428 feet, total depth 3,438 feet, and swabbed 8 bbls. of oil an hour but was not completed.

Ryan Consolidated Oil Corp. No. 4 Bemis A, NW NE NW section 22-11-17w, had Siliceous lime at 3,423 feet, total depth 3,430 feet, and 3,000 feet of oil rose in the hole in two hours.

Shell Petroleum Corp. No. 1 Madden, NE NE SE section 29-11-17w, was pumping at the rate of 1 bbl. of oil and hour at 3,543 feet, total depth, after topping Siliceous lime at 3,495 feet.

McPherson Drilling Co. No. 1 Bemis, SE SE SW section 33-11-17w, found Siliceous lime at 3,613 feet, was bottomed at 3,623 feet, was acidized and swabbed 126 bbls. of oil in three hours but was not completed.

Estimated Daily Production

Estimated daily production of Kansas for the week ending September 25 and for the preceding week was as follows:

	Barrels	
	Sept. 25	Sept. 18
Oxford City	1,400	1,350
Burrton	14,200	14,000
Ritz-Canton	4,850	4,875
Graber	2,875	2,400
Hollow-Nikkel	2,625	2,600
Lerado	1,125	2,125
Voshell	2,425	2,450
Wellington	3,225	3,150
Ellsworth County:		
Lorraine	4,150	4,175
Other pools	1,390	1,165
Rice-Barton counties:		
Bloomer	3,850	4,700
Chase	7,[illegible]45	8,[illegible]50
Geneseo	2,825	2,000
Raymond	1,400	1,525
Silica	18,475	18,900
Keesling	1,200	1,725
Hauschild	925	1,400
Miscellaneous Rice	9,800	9,910
Miscellaneous Barton	6,250	6,020
Russell County:		
Fairport	2,025	2,385
Gorham	1,590	1,800
Russell	2,420	1,915
Sullivan	8,790	8,195
Trapp	14,010	14,405
Miscellaneous Russell	7,840	8,065
Sedgwick County:		
Valley Center	1,070	1,030
Miscellaneous	2,720	2,735
Ellis County:		
Bemis	5,150	5,225
Miscellaneous	3,240	2,820
Kingman County	500	460
Stafford County	2,625	4,015
Greenwood County	10,000	10,050
Butler County	15,100	15,400
Other fields	24,030	24,155
Total Kansas	193,025	195,475

Rice County

Continental Oil Co. and associates No. 6 Ainsworth, SW NW NE section 25-18-8w, Geneseo district, Rice County, found Siliceous lime at 3,134 feet, was bottomed at 3,223 feet, pumped 247 bbls. of oil in the first four hours and 245 bbls. the second four hours. Later it pumped 282 bbls. in four hours, and 288 bbls. the next four hours, making potential of 1,747 bbls.

Sinclair Prairie Oil Co. No. 3 Bolton, SW SE SW section 31-18-7w, had Siliceous lime at 3,244-47 feet, total depth, pumped 162 bbls. of oil the first four hours of potential test, 152 bbls. the next two hours and made potential of 916 bbls.

Stanolind Oil & Gas Co. No. 6 Panning, SE SW NW section 33-19-10w, Silica field, found Siliceous lime at 3,283 feet, total depth 3,291 feet, was acidized and made potential of 2,204 bbls. of oil.

Continental Oil Co. No. 1 Anna Groth, SW SE SW section 32-20-7w, flowed 299 bbls. of oil the first four hours, 310 bbls. the next four hours and gained potential of 1,796 bbls. Conglomerate was topped at 3,322 feet, total depth 3,337 feet.

Gulf Oil Corp. No. 2 Gossman, SE SW NE section 8-21-7w, Saxman-Theede area, topped Conglomerate at 3,331 feet, had pay at 3,346 feet and was bottomed at 3,358 feet. It swabbed 128 bbls. of oil in four hours, was shot with 20 quarts and flowed 255 bbls. of oil in four hours of potential test, 252 bbls. the next four hours and made potential of 1,515 bbls.

Bartlafonte No. 1-A Freeman, SE NE SE section 4-21-6w, an old well that had been abandoned at 1,540 feet, was deepened to 1,558 feet without result, and again abandoned.

Stafford County

Stanolind Oil & Gas Co. No. 3 William Spangenberg, SW SW NW section 29-22-11w, Stafford County, had top of Siliceous lime at 3,561 feet and was bottomed at 3,607 feet. After shooting and acidizing with total of 7,500 gallons, it made potential of 259 bbls. of oil.

Stanolind Oil & Gas Co. and others No. 4 Allen, NW NE SE section 31-22-11w, was an abandoned location.

Stanolind Oil & Gas Co. and others No. 9 Heyen B, SE SW NE section 31-22-11w, Richardson area, had Siliceous lime at 3,725-29 feet, total depth, with nothing showing, and was dry and abandoned.

Atlantic Refining Co. and associates No. 2 Pounds, C E half W half NE section 27-24-13w, St. John area, found Siliceous lime at 4,131 feet and was dry and abandoned after plugging back from 4,149 feet, total depth, to 3,640 feet, where it had 3,200 feet of water in the hole.

Reno County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 3 Moore, NE SE SE section 8-26-4w, Hilger pool, Reno County, found Viola lime at 4,021 feet, was bottomed at 4,024 feet, acidized and made potential of 1,574 bbls. of oil, with 1 per cent water.

Inco Production Co. No. 1 Mueller, NW NE SW section 30-24-4w, topped Chat at 3,356 feet, total depth 3,400 feet, plugged back to 3,380 feet, pumped 100 bbls. of oil and 25 per cent water in 15 hours, was acidized and completed for an estimated 15 bbls. of oil daily.

Harvey County

Tom Palmer and others No. 1 Schrag B, NE NW NW section 31-23-3w, Harvey County sector of the Burrton field, found Chat at 3,258 feet, total depth 3,362 feet, was treated with 2,000 gallons of acid and made potential of 1,239 bbls. of oil.

McPherson County

The newest completion in the Graber pool, McPherson County, is Continental Oil Co. and others No. 4 Graber, NE NW SE section 29-21-1w. It found Hunton lime at 3,292 feet, was bottomed at 3,335 feet, acidized with 4,000 gallons and made potential of 400 bbls. of oil.

Shaffer and associates No. 1 Hull Estate, NE NE SW section 11-20-3w, had Mississippi lime at 3,018-74 feet, total depth, nothing was showing and it was dry and abandoned.

H. & M. Drilling Co. No. 4 Sellers, SW SE NE section 31-19-1w, was reported as an abandoned location.

Cowley County

Texas Co. No. 1 Cranston, SE SE SW section 19-32-6, Cowley County, found top of Layton sand at 2,205 feet, had first oil at 2,238 feet, total depth 2,242 feet, plugged back to 2,240 feet, was shot and made potential of 204 bbls. of oil, with 129 bbls. of water.

Carter Oil Co. No. 1 Shields, SW SW SE section 19-32-6, had Layton sand at 2,205 feet, pay at 2,220 feet, total depth 2,240 feet. After shooting, it pumped 103 bbls. of oil and 35 bbls. of water in eight hours, later making potential of 193 bbls. of oil.

Ryan Consolidated Co. and others No. 2 Couch, SE SW SE section 13-30-5, had Bartlesville sand at 2,789-2,861 feet, total depth, plugged back to 2,859 feet, was shot and pumped 2½ bbls. of oil daily.

Sumner County

Sinclair Prairie Oil Co. No. 3 Herrick, SE NW SE section 15-35-2e in the North Vernon area, Sumner County, near the Oklahoma line, found Bartlesville sand at 3,389 feet, had pay at 3,418 feet, based sand at 3,444 feet and was bottomed at 3,446 feet in Chat. It flowed 179 bbls. of oil in first four hours of potential test, 158 bbls. the next four hours and made potential of 949 bbls.

Butler County

Phillips Petroleum Co. No. 3 Moore, NE NW SE section 1-25-3e, Butler County, topped Mississippi lime at 2,659 feet, total depth 2,683 feet, was acidized, and completed.

Vickers Petroleum Co. and others No. 4 Joseph, C N half N half NW section 2-25-3e, had Mississippi lime at 2,720 feet, total depth 2,731 feet, was acidized and pumped 56 bbls. of oil and 75 bbls. of water daily.

Greenwood County

Superior Oil & Gas Co. No. 13 Jones, NW SE SW section 21-23-13, Greenwood County, topped Siliceous lime at 2,069 feet, had a hole full of water at 2,106 feet, total depth, and was dry and abandoned.

Lykes and others No. 5 Beauchat, C N half SE section 5-24-12, had a hole full of water in top of Siliceous lime at 2,270 feet, total depth, and was dry and abandoned.

Woodson County

Saco Oil Co. No. 5 Klick, SE SW SW section 20-25-14, Woodson County, had Bartlesville sand at 1,398-1,415 feet, total depth, pumped 75 bbls. of oil daily and was completed.

Pure Oil Co. No. 13 Winterscheid, NE NE NW section 6-24-14, an old well, was deepened from 1,580 feet to Mississippi lime at 1,721 feet, total depth 1,765 feet, was acidized and pumped 26 bbls. of oil and 118 bbls. of water in 24 hours, recompleted.

C. L. Sheedy and associates No. 2 Fulhage A, NW SW SW section 27-25-14 ,found Bartlesville sand at 1,460-95 feet, total depth 1,634 feet, plugged back to 1,495 feet, was shot and completed as a 15-bbl. pumper.

Elk County

Veedles Supply & Development Co. No. 1 Smay, NW NW SW section 28-28-12, an old Elk County well.

(Continued on Page 86)

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Among Gulf Coast Drilling Contractors

R. B. (Cap) Fields has apparently opened a new field for the Merit Oil Co. in Chambers County as a result of a drill stem test at No. 1 Wright, which showed 210 feet of 31-gravity oil along with several hundred feet of salt water. The test, lasting 10 minutes, was made at 6,441-56 feet. While the presence of salt water does not encourage the outlook of the well, the showing of oil confirms the geophysical picture of the area and will no doubt result in additional exploration whether or not the present well fails to make a commercial oil producer. It is planned to carry the hole to the Frio, and if no shows are encountered, a production test will be made of the above section.

Loffland Brothers have spudded an interesting test for themselves, No. 1 Fontenot, in the South Jennings field, Jefferson Davis Parish, Louisiana. No. 1 Brookshire, being drilled for the Continental Oil Co. and located in the Abbeville field, Vermilion Parish, has reached a depth of 11,909 feet, where it attempted to blow out. Considerable mud had to be used and drilling is expected to continue. For the same company at Shepherds Mott, Matagorda County, No. 2 Hawkins is drilling below 8,900 feet and is apparently through the heaving shale section.

H. J. DeArman has completed his No. 2 Fite in the Sandy Point field, Brazoria County, and the rig is expected to be moved to another location. Initial production was 103 bbls. per day through an eighth-inch choke. No. 1 Edmundson, an interesting outpost test being drilled in the same field, is below 3,300 feet.

Ben (Bud) Coyle is preparing to make a production test of a 10,000-foot hole in the Jeanerette field in St. Mary Parish, Coastal Louisiana, for the Herton Oil Co. at No. 1 Banta-Roanes. Oil sand has been cored at 10,278-88 feet and 10,355-74 feet and casing is being cemented after drilling to a depth of 10,480 feet. At the North Starks Prospect, Calcasieu Parish, plug has been drilled at D. D. Oil Co. No. 2 Lutcher Moore preparatory to drilling below 8,340 feet.

After opening for Continental Oil Co. what is considered one of the most important strikes in the Gulf Coast district, Nicklos Drilling Co. is marking time in the Villa Platte area, Evangeline Parish, until development of this new field is worked out by Continental. Completed in the Sparta member of the Cook Mountain horizon at 9,007-35 feet, the well is flowing approximately 265 bbls. of 52.4-gravity oil per day through various chokes with tubing pressure 2,150 pounds and casing pressure 2,350 pounds. Activities continue with three rigs in the Valentine field in Lafourche Parish, while another is on a workover job at Tepetate for the Continental Oil Co.

George Echols has rigged up for his No. 1 Bennett in the Heyser field and is nearing the pay horizon in Sinclair Prairie Oil Co. No. 4 Bennett. With the opening of two new sands in this field during the past few weeks, Heyser is the most active field in the lower Gulf Coast district. Active operations are being done by Humble Oil & Refining Co., Normandie Oil Co., Magnolia Petroleum Co., Sun Oil Co., Portilla Drilling Co. and Sinclair Prairie Oil Co.

Edwards Drilling Co. has abandoned Woodley Petroleum Co. No. 2 McMurtry in the Hardin field and is moving over for a second test for the same company. Rigging up continues at Lockridge for McCurdy & Johnson No. 1 State while drilling continues in the Dickinson field for Turman Oil Co. and Kenben Oil Co. and in the Amelia and Hastings fields for Humble Oil & Refining Co.

Martin Thompson has spudded No. 1 Kaener in southern Wharton County for Buck & Holt. It is scheduled to be drilled to a contract depth of 6,000 feet.

Rowan Drilling Co. has reached the sand in the Satsuma field in Harris County, and is preparing for a production test in No. 1 F. A. Carpenter. At Venice, in Plaquemines Parish, Louisiana, Tide Water Oil Co. No. 4 Manhattan Fruit Co. is drilling.

Cron & Gracey have completed Barnsdall Oil Co. No. 1 Edwards in Aransas County as a large distillate well. It was drilled to 9,785 feet and was completed through perforations at approximately 7,500 feet. Other Cron & Gracey contracts are centered at Lake Long, Tomball, Dickinson, Flour Bluff, Hastings and West Hackberry fields for Fohs Oil Co., Humble Oil & Refining Co., Shell Petroleum Corp. and Stanolind Oil & Gas Co.

Of the 38 new locations reported on the Texas Coast the past week, three were wildcats. In the southwestern part of Jefferson Parish Shell Petroleum Co. is dredging canal to No. 1 McFaddin, on the McFaddin Beach Prospect, while in Harris County H. M. Harrel is rigging up for Medford & Burke No. 1 Pruitt, located in the Gilbert Brooks Survey. In Madison County, Faucett & Kyle have made location for No. 1 Bailey in the Thomas Boatwright Survey. Of the field locations, two were made in the recently opened Hitchcock field in Galveston County by the Merit Oil Co. and N. W. Hunter for tests on the Stewart Title Guaranty Co. tracts in the J. D. Moore Survey.

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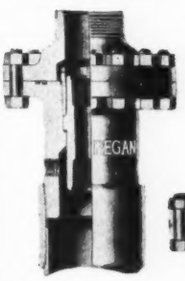

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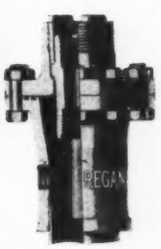

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Rocky Mountain Area

By
T. R. INGRAM

ONE-HALF MILE EXTENSIONER REVIVES OLD VACUUM AREA

DENVER, Colo., Sept. 27.—The old Vacuum area in Lea County, New Mexico, assumed importance when the Magnolia Petroleum Co. uncovered deep production at No. 2 State Bridges, C SW SE section 14-17-34, a half-mile southwest extension. It had pay at 4,562 feet, total depth 4,593 feet, and flowed 582 bbls. of oil in 24 hours through casing with tools in the hole. It later flowed 180 bbls. in 2½ hours and was shut in. It is the third producer for Vacuum.

Completions of the week in Lea County follow:

Atlantic Refining Co. No. 2-P State, C NE NW section 25-20-36, topped pay at 3,790 feet, total depth 3,853 feet, flowed 252 bbls. of oil in 6 hours.

Continental Oil Co. No. 7-B-18 Britt, C SW SE section 18-20-37, pay 3,845 feet, total depth 3,878 feet, shot, flowed 10 bbls. of oil hourly. Same company's No. 2-A-15 Elliott, C SW SE section 15-22-37, pay 3,585 feet, total depth 3,675 feet, flowed 98 bbls. of oil daily. Same company's No. 1 Jack, C NW NE section 27-24-37, pay 3,510 feet, total depth 3,550 feet, flowed 43 bbls. of oil an hour.

J. E. Farrell No. 2-B Walden, C NE SW section 15-22-37, pay 3,660 feet, total depth 3,704 feet, shot, flowed 40 bbls. of oil in 24 hours with 1,500,000 feet of gas.

Gulf Oil Corp No. 2-H Graham-State, C SW SW section 13-20-36, pay 3,790 feet, total depth 3,875 feet, acidized, flowed 450 bbls. of oil in 6 hours, with 1,572,000 feet of gas. Same company's No. 2 Baker, C NE SE section 5-22-37, pay 3,682 feet, total depth 3,735 feet, flowed 84 bbls. of oil in 14 hours. Same company's No. 1 Manda, C SE SW section 21-22-37, pay 3,550 feet, total depth 3,670 feet, acidized, flowed 70 bbls. of oil in 24 hours. Same company's No. 1 Stebbins, C SE NW section 5-22-37, pay 3,685 feet, total depth 3,760 feet, acidized, flowed 232 bbls. of oil in 10 hours, with 1,474,000 feet of gas.

Landreth Production Co. No. 4 Grizzell, C SW SW section 5-22-37, pay 3,735 feet, total depth 3,780 feet, acidized, flowed 21 bbls. of oil hourly.

Ohio Oil Co. No. 2 Turner, SW NW SE section 29-21-37, pay 3,710 feet, total depth 3,800 feet, flowed 15 bbls. of oil daily.

Southern Petroleum Exploration Co. No. 1 Rinewalt, C NW NW section 4-22-37, pay 3,656 feet, total depth 3,756 feet, swabbed and flowed 50 bbls. of oil in 12 hours; acidized, flowed 67 bbls. of oil an hour through choke.

Texas Pacific Coal & Oil Co. No. 5-A State, C NE NE section 7-22-36, pay 3,760 feet, total depth 3,782 feet, flowed 1,187 bbls. of oil naturally through 2½-inch casing in one hour, and was estimated good for 20,000 to 25,000 bbls. daily. It is in the South Eunice area.

Woodley Petroleum Corp. No. 2 Cook, C SE SE section 28-25-37, pay 3,176 feet, total depth 3,284 feet, shot, flowed 240 bbl. of oil daily.

Two tests in Eddy County were completed, both failures. Superior Oil Corp. No. 1 Foster, SE SE NE section 17-17-31, was dry and abandoned when water intruded at total depth of 3,680 feet. H. & W. Drilling Co. No. 1 Storey Permit, C NW SE section 31-19-30, was dry and abandoned when the hole filled with sulfur water from 1,718-22 feet, total depth.

Lea County

Amerada Pet. Corp. No. 6 Byrd, SE sec. 12-20-36. Loc.
Amerada Pet. Corp. No. 3 Laughlin, C NW NE sec. 9-20-37. T.D. 2,585 ft.; set 8-in. 2,573 ft.
Amerada Pet. Corp. No. 2-G State, C NW SW sec. 18-19-37. Drlg. 3,477 ft.
Anderson-Prichard Oil Corp. No. 1 Wells, C SE SE sec. 5-27-37. Drlg. 3,575 ft.
Anderson-Prichard Oil Corp. No. 1 Gregory, NW sec. 33-25-37. T.D. 3,237 ft.; flowed 15 to 20 B.O.P.H.
Anderson-Prichard Oil Corp. No. 2 Langlie, SE sec. 8-25-37. T.D. 3,466 ft.; shot; cleaning out.
Anderson-Prichard Oil Corp. No. 3 Langlie, NE sec. 8-25-37. Loc.
Anderson-Prichard Oil Corp. No. 1-D Langlie, NE sec. 8-25-37. Rigging up rotary.
Anderson-Prichard Oil Corp. No. 1 Lanehart, SW sec. 21-25-37. T.D. 2,917 ft.; set 5-in. 2,891 ft.
E. G. Bradley No. 1 Lanehart, C SW NE sec. 28-25-37. T.D. 3,221 ft.; acidized; swabbing.
Bradley Oil Co. No. 1 Grizzell, C SW NE sec. 5-22-37. Drlg. 670 ft.
Cities Service Oil Co. No. 6-A Clossen, C SW SE sec. 6-22-36. Drlg. 3,490 ft.
Cities Service Oil Co. No. 1-H State, C NE NE sec. 17-22-36. T.D. 3,884 ft.; preparing to deepen.
Continental Oil Co. No. 1-B-10 Britt, SW sec. 10-20-37. Moving in material.
Continental Oil Co. No. 1-A-15 Cline, NW sec. 15-23-37. Wildcat; P.B. from 3,860 to 3,672 ft.; pumping 10 B.O. daily.
Continental Oil Co. No. 6-A-30 Lockhart, NW sec. 30-21-36. Drlg. 3,783 ft.
Continental Oil Co. No. 2-B-31 Lockhart, C SE SW sec. 31-21-36. T.D. 3,775 ft.; set 5½-in. at 3,774 ft.
Continental Oil Co. No. 3-B-31 Lockhart, SE sec. 31-21-36. Derrick.
Continental Oil Co. No. 6 Lockhart, NE SE NW sec. 30-21-36. T.D. 294 ft.; set 10¾-in. csg. at 286 ft.
Continental Oil Co. No. 3-B-10 Sanderson, NE NE SE sec. 10-20-36. T.D. 3,891 ft.; F. 65 B.O. in 7 hrs.; testing.
Continental Oil Co. No. 6-A-11 Sanderson, NE SW SW sec. 11-20-36. Drlg. 3,883 ft.
Continental Oil Co. No. 3-A-14 Sanderson, NE sec. 14-20-36. Drlg. 30 ft.
Continental Oil Co. No. 1-E-17 State, C SE SE sec. 17-22-36. T.D. 3,842 ft.; F. 219 B.O. in 24 hrs.; testing.
Continental Oil Co. No. 3-A-26 State, C SW NE sec. 26-19-36. T.D. 1,345 ft.; set 7⅝-in. 1,339 ft.
Continental Oil Co. No. 1-A-30 Warren, C SE NW sec. 30-20-38. Drlg. 3,652 ft.
Crandall, Osmond & Maxwell et al No. 1 Maxwell Permit, C SE SE sec. 2-11-36. T.D. 2,351 ft.; W.O.C.
Cranfill & Germany No. 1 Weir, C NE NE sec. 15-20-37. T.D. 4,210 ft.; S.D.O.
Culbertson & Irwin No. 2-A Humphrey, NE NE NW sec. 3-25-37. Drlg. 1,348 ft.
Culbertson & Irwin No. 3-A Humphrey, NE SW NE sec. 3-25-37. T.D. 1,170 ft.; setting csg.
Culbertson & Irwin No. 2 Moseley, NE NW SW sec. 34-24-37. Drlg. 3,297 ft.
Emperor Oil Co. No. 1 Johns, C SW NW sec. 24-17-32. Drlg. 2,890 ft.
Empire Oil & Ref. Co. and Repollo Oil Co. No. 2 Brunson, NW sec. 3-22-37. Drlg. 3,570 ft.
Empire Oil & Ref. Co. No. 1-G State, sec. 2-21-36. T.D. 3,900 ft.; shut down.
Empire Oil & Ref. Co. No. 2-B State, C SE SW sec. 2-21-37. Drlg. 3,850 ft.
J. E. Farrell No. 2-C Walden, C SE SW sec. 15-22-37. Drlg. 3,665 ft.
General Crude and Magnolia Pet. Co. No. 2-C State, SE SW SE sec. 16-23-36. Drlg. 3,128 ft.
Great Western Prod. Co. No. 1 Bordages, NW cor. sec. 33-19-37. Drlg. 3,825 ft.
Gulf Oil Corp. No. 1 Boyd, sec. 23-22-37. T.D. 3,681 ft.; testing.
Gulf Oil Corp. No. 2 Cole, C NE NE sec. 16-22-37. T.D. 1,141 ft.; shut down.
Gulf Oil Corp. No. 1 Elliott, SW SE SE sec. 15-25-37. Drlg. 3,380 ft.
Gulf Oil Corp. No. 1 Kyle, C SE SE sec. 7-19-37. T.D. 4,025 ft.; running tubing.
Gulf Oil Corp. No. 3-C Kutter, NW sec. 18-19-37. Derrick.
Gulf Oil Corp. No. 1 Mattern G, C NE SE sec. 18-21-37. T.D. 3,654 ft.; fishing.
Gulf Oil Corp. No. 2 Reeves, C SE NW sec. 29-20-37. T.D. 3,840 ft.; testing.
Gulf Oil Corp. No. 1 Stitcher, C SE SW sec. 4-22-37. T.D. 3,535 ft.; set 7-in. 3,532 ft.
Gulf Oil Corp. No. 2 Stuart, C SE NW sec. 10-25-37. T.D. 2,500 ft. in new hole; set 8⅝-in. at 2,494 ft.
Gulf Oil Corp. No. 1-B White, SE sec. 35-20-36. Derrick.
Homestead No. 1 Clifford, SW sec. 12-26-32. Wildcat; drlg. 4,275 ft.
Humble O. & R. Co. No. 1 Fopeano, C SE SW sec. 25-20-36. Drlg. 3,185 ft.
Humble O. & R. Co. No. 2 Saunders, C NW NW sec. 9-22-34. Drlg. 2,045 ft. in new hole.
Jal Nat. Gas Corp. No. 2 Justis, NE sec. 20-25-37. T.D 3,029 ft.; testing.
Mack & Stauffer No. 2 Grizzell, C NE NE sec. 8-22-37. Drlg. 3,575 ft.
Magnolia Pet. Co. No. 4 Cary, C SW SW sec. 29-21-37. Drlg. 3,474 ft.
Magnolia Pet. Co. No. 1 Hardy, SW SW NW sec. 29-21-37. Drlg. 3,750 ft.
Magnolia Pet. Co. No. 1 State G, NW NW NE sec. 34-17-34. T.D. 4,905 ft.; P.B. 4,794 ft.
Magnolia Pet. Co. No. 2 State-Bridges, sec. 14-17-34. T.D. 4,593 ft.; F. 582 B.O. in 24 hrs.
J. A. Mascho No. 1 Cloyd, C SE SE sec. 20-22-33. Wildcat; drlg. 1,060 ft.
McDonald & Weiner No. 1 Elliott, SE cor. sec. 19-21-37. Drlg. 2,965 ft.
Mid-Continent Pet. Corp. No. 4 Greer, C SW NW sec 21-22-36. T.D. 3,830 ft.; swabbing.
Murray et al No. 4 State Wallace, NW SW NW sec. 3-21-36. T.D. 3,840 ft.; flowing 45 B.O. daily.
National Drlg. & Prod. Co. No. 1 Flint, C NE NE sec. 29-20-34. Wildcat; drlg. 3,653 ft.
Ohio Oil Co. No. 2 Grizzell, C NW SE sec. 5-22-37. T.D. 3,600 ft.; prep. to drill in.
Ohio Oil Co. No. 1 Hardy, NE NE SE sec. 20-21-37. T.D. 150 ft.; R.U.S.T.
Ohio Oil Co. No. 1 Kutter D, C SW SW sec. 8-19-37. Drlg. 3,535 ft.
Ohio Oil Co. No. 7 State-McDonald, C SW SE sec. 16-22-36. T.D. 3,871 ft.; cleaning out.
Ohio Oil Co. No. 9 State McDonald, SW sec. 16-22-36. Drlg. 270 ft.
Phillips Pet. Co. No. 1 Lea, C NW NW sec. 30-17-34. Wildcat; T.D. 4,952 ft.; plugging back.
Plains Prod. Co. No. 1 Humphreys, NE sec. 3-25-37. Loc.
Plains Prod. Co. No. 1 Stuart, NE SW SW sec. 10-25-37. Drlg. 490 ft.
Repollo Oil Co. No. 1 Carter, SW SE NE sec. 8-24-37. Drlg. 3,362 ft.
Repollo Oil Co. No. 3 Jamison, SW NE NE sec. 21-24-37. T.D. 3,639 ft.; F. 25 B.O. in 24 hours.
Repollo Oil Co. No. 4 Roach, NW NW SW sec. 21-20-37. Drlg. 3,611 ft.
Repollo Oil Co. No. 1 Turner, sec. 29-21-37. T.D. 3,800 ft.; flowed 66 bbls. oil in 24 hrs.
Repollo Oil Co. No. 2 Moseley, NE SE SW sec. 34-24-37 Drlg. 3,005 ft.
Repollo Oil Co. No. 1 White, SE NE SE sec. 35-20-36. Drlg. 3,500 ft.
Republic Production Co. No. 3 Crosby, SE SE SW sec. 28-25-37. T.D. 1,995 ft.; S.D. repairs.
Rowan Drlg. Co. No. 1-A Elliott, SW sec. 27-22-37. T.D. 3,665 ft.; flowing est. 100 B.O.P.D. while cleaning out.
Rowan Drlg. No. 1 Elliott B, C NE NW sec. 9-22-37. Drlg. 3,360 ft.
Rowan Drlg. Co. No. 2 Elliott B, C NW NW sec. 9-22-37. T.D. 1,200 ft.; fishing.
Rowan Drlg. Co. No. 2 Walden, C NE NW sec. 15-22-37 Derrick.
Rushwold Oil Co. No. 1 Mattix, NE sec. 10-24-37. Cellar and pits.
Samedan Oil Co. No. 3 Hughes, sec. 4-23-27. T.D. 3,631 ft.
Schermerhorn Oil Co. No. 2 Woolworth, sec. 29-24-37. T.D. 3,577 ft.; F. 65 B.O. in 24 hrs.; fishing.
Shasta Oil Corp. No. 1 Woolworth, NE NE NW sec. 28-24-37. Drlg. 3,337 ft.
Shell Pet. Corp. No. 3 Black, SE SE SW sec. 21-24-37. Drlg. 2,640 ft.
Shell Pet. Corp. No. 4-E State, C SW NW sec. 12-20-36. Drlg. 3,777 ft.
Skelly Oil Co. No. 5 J. B. Baker, C SE NW sec. 27-22-37. T.D. 3,620 ft.; testing.
Skelly Oil Co. No. 1 Hill, C Lot 7, sec. 6-21-37. T.D. 3,870 ft.; P.B. 3,790 ft.; testing.
Skelly Oil Co. No. 3 E. Sims, C SE SE sec. 2-23-37. T.D. 3,320 ft.; standardizing.
Skelly Oil Co. No. 3 G. W. Sims, C NW NE sec. 9-23-37. T.D. 3,642 ft.; cleaning out.
Skelly Oil Co. No. 4 G. W. Sims, C NW NW sec. 10-23-37. T.D. 3,634 ft.; C.O.
Skelly Oil Co. No. 1-C R. R. Sims, sec. 3-23-37. Drlg. 3,622 ft.
Skelly Oil Co. No. 6 R. R. Sims, C SW SW sec. 3-23-37. Drlg. 3,440 ft.
Skelly Oil Co. No. 1-E W. P. Sims, C SW NE sec. 10-23-37. T.D. 3,625 ft.; flow. 452 bbls. in 24 hrs.
Skelly Oil Co. No. 2 Sticher, C NW SW sec. 4-22-37. Drlg. 285 ft.
Stanolind O. & G. Co. No. 26-A Farnsworth, C SE NW sec. 18-26-37. T.D. 3,146 ft.; P.B. 3,185 ft.; testing.
Stanolind O. & G. Co. No. 8 Gilluly A, C NW SE sec. 24-20-36. Derrick.
Stanolind O. & G. Co. No. 9-A Gilluly, C NE NW sec. 24-20-36. Drlg. 1,841 ft.
Stanolind O. & G. Co. No. 2-A Langlie, C NW SW sec. 9-25-37. R.U.R.
Stanolind O. & G. Co. No. 1-B Hill, NE sec. 6-21-37. Loc.
Stanolind O. & G. Co. No. 2-B Langlie, C NW NW sec. 15-25-37. T.D. 3,458 ft.; P.B. 3,153 ft.; S.D.O.
Stanolind O. & G. Co. No. 1 State, C SE SE sec. 2-21-36. Drlg. 1,380 ft.
Stanolind O. & G. Co. No. 1 State, C SE SE sec. 16-24-37. Derrick.
Stanolind O. & G. Co. No. 1 Thompson, NE sec. 6-21-27. Loc.
W. H. Street No. 2 Wood, C SW NE sec. 22-22-37. T.D. 3,692 ft.; F. 30 B.O.P.D.
Texas Co. No. 1-L State, C SW NE sec. 1-18-34. R.U.R.
Texas Co. No. 2 Weir, C SE SW sec. 23-19-36. T.D. 4,046 ft.; acidized; testing.
Texas Pacific C. & O. Co. No. 6-A State, Acct. 2, NE sec. 7-22-36. R.U.R.
Tide Water Oil Co. No. 4-J State, C NE NW sec. 17-19-37. T.D. 4,030 ft.; swabbing.
Two State Oil Co. No. 1 Atha, C SW SW sec. 31-21-36. Drlg. 1,025 ft.
Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. T.D. 3,880 ft.; C.O.

Eddy County

F. E. Baker No. 1 Eddy, NE sec. 12-22-27. T.D. 55 ft.; shut down.
Fred Brainerd No. 2 Brainerd, sec. 5-18-27. T.D. 1,466 ft.; shut down.
Ed Bryant No. 1 Stebbins, C NE SW sec. 19-20-29. Drlg. 795 ft.
Carper Drlg. Co. No. 2 Geissler, SW SE NW sec. 23-17-30. Drlg. 2,675 ft.
Cities Service Oil Co. No. 1 State, CSL SW SE sec. 16-17-30. Drlg. 2,639 ft.
T. D. Collins No. 1 Weiler, C NW NW sec. 13-24-36. T.D. 1,970 ft.; P.B. 1,965 ft.; testing.
Continental Oil Co. No. 1 Barret, SE sec. 14-20-30. Drlg. 2,145 ft.
Continental Oil Co. No. 1 Etz, C NW NE sec. 24-16-30. T.D. 3,185 ft.; swabbing.
Emperor Oil Co. No. 3 Puckett, C NE NW sec. 24-17-31. Drlg. 3,140 ft.
Finley & Cherry No. 1 Buchley, C NW NW sec. 28-16-31. Wildcat; T.D. 1,220 ft.; bailing water.
Flint Prod. Co. No. 1-B State, SE sec. 20-17-30. Drlg. 3,800 ft.
C. J. Frederick No. 1 Reed, C NE SW sec. 28-24-28. T.D. 95 ft.; S.D., repairs.
F. W. & Y. Oil Co. No. 7-A Gissler, SE sec. 14-17-30. Drlg. 1,220 ft.
F. W. & Y. Oil Co. No. 8-A Gissler, NE sec. 23-17-30. Loc.

F. W. & Y. Oil Co. No. 1-B Gissler, SW sec. 14-17-30. Loc.
F. W. & Y. Oil Co. No. 3 Jackson, C NW SE sec. 13-17-30. T.D. 2,953 ft.; fishing.
Grayburg Oil Co. No. 8 Burch, SE SE NW sec. 19-17-30. Drlg. 2,540 ft.
R. L. Holcomb No. 1 State, NW sec. 22-17-28. T.D. 115 ft.; shut down.
Woodworth Hawkins No. 1 Mack, C SW SW sec. 20-24-27. Drlg. 252 ft.
C. F. Ingram No. 1 Page, NE NE SW sec. 15-21-28. T.D. 1,140 ft.; S.D.
Murchison & Closuit No. 1-C State, SW SE NE sec. 16-17-31. T.D. 3,749 ft.; P.B. 3,745 ft.; H.F.O.; to pmp.
Nash-Windfohr & Brown No. 4-A Jackson, NE sec. 13-17-30. Drlg. 3,247 ft.
Nash-Windfohr & Brown No. 5-A Jackson, NE sec. 13-17-30. T.D. 760 ft.; S.D.; repairs.
Nash-Windfohr & Brown No. 4-A Stevens, C SW SW sec. 13-17-30. Drlg. 2,935 ft.
Nash-Windfohr & Brown No. 2-B Stevens, NW sec. 13-17-30. Rig.
Nash-Windfohr & Brown No. 6-A Jackson, SE sec. 13-17-30. R.U. machine.
Nash-Windfohr & Brown No. 7-A Jackson, SE sec. 13-17-30. R.U. machine.
W. A. Nichols No. 1 Johnson, NE sec. 35-16-21. Wildcat; T.D. 3,697 ft.; tstg.
Premier Pet. Corp. No. 1-E Parker, sec. 22-17-30. T.D. 2,943 ft.; set 7-in. csg.
Repollo Oil Co. No. 2-D McIntyre, NW NE SW sec. 20-17-30. Drlg. 3,089 ft.
Paul Sargent No. 1 State, NE sec. 16-17-31. Drlg. 3,292 ft.
R. A. Shugart No. 1 Cowethard, C NW SW sec. 35-18-31. Drlg. 2,960 ft.
W. O. Snyder No. 1 Pecos Irrigation, C NE SE sec. 15-25-28. T.D. 960 ft.; S.D. repairs.
Weiner & McDowell No. 1 Kerr, C SE NW sec. 3-24-24 T.D. 1,820 ft.; S.D.O.
W. K. Royalty Co. No. 1 State, C SW NE sec. 16-17-31. T.D. 3,239 ft.; tstg.
Western Gas Co. No. 1 Cagle, C NW NW sec. 8-26-30. T.D. 1,450 ft.; U.R. at 1,284 ft.

Chaves County

English & Harmon No. 11 Billingslea, SE sec. 9-15-29. T.D. 3,545 ft.; P.B. 3,427 ft.; S.D.
E. J. Fisher No. 1 Etz Permit, NE sec. 23-7s-36. M.I.M.
Mathewson et al No. 1 McDonald, C NE NW sec. 19-14-27. Drlg. 470 ft.

Curry County

Bond & Harrison No. 1 Hart ranch, C NW SE sec. 13-2n-31. T.D. 2,932 ft.; drlg. on lost tools.

Dona Ana County

Juels C. Bertrand No. 1 Casad Permit, sec. 24-26-5e. T.D. 47 ft.; S.D.O.

McKinley County

S. Dysart No. 1 Government, NE sec. 14-14-10w. T.D. 1,390 ft.; fsg.

Otero County

George Mulvey No. 1 State, SW cor. sec. 11-25-8. T.D. 263 ft.; S.D.
Fred Turner No. 1 Evans, NW NW SW sec. 22-14-12. O.W.D.D.; wildcat; T.D. 3,763 ft.; S.D.

Roosevelt County

C. S. Peterson and Conquistadores Oil Co. No. 1 Good, NW SE SE sec. 28-5s-30. Drlg. 360 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 North Albuquerque, NE SE NW sec. 19-11n-4e. S.D. 3,700 ft. for repairs.

San Juan County

Red Butte Oil Co. No. 1 Government, C SW SW section 6-21n-13w, Stoney Butte district, was dry and abandoned at 840 feet.

Jack Amenda No. 4 Hart, NW NE SW sec. 25-30n-12w. Drlg. 1,995 ft.
Anna Oil Corp. No. 6 Govt., SW NE NE sec. 33-30n-11w. S.D. 725 ft. for pipe.

Socorro County

Central New Mexico Oil Co. No. 1 Brown, SE NW sec. 16-3n-1e. S.D. 1,000 ft.; boiler repairs.

Valencia County

C. A. Brober et al No. 1 Fuqua, NE NE sec. 19-5n-3e. S.D. 900 ft. to chge. to rot.
Big Three Oil Co. No. 1 Dailes Townsite, SE SE NW sec. 5-6n-1e. T.D. 6,001 ft.; set whipstock at 5,640 ft.; drlg. by D.P.

COLORADO

Adams County

Glenridge Oil Corp. No. 1 Hills, SE SE SE sec. 27-3s-64w. T.D. 4,345 ft.; fshg. for pipe.

Archuleta County

Lafayette M. Hughes No. 14 Gramps, an outpost well on the No. 1 Gramps structure, half a mile west and a half mile north of the nearest producer, is unofficially reported to have had water in the Dakcta at 2,260 feet.

Prospect Oil Syndicate No. 1 Lena M. Garnett, just to the north of No. 14 Gramps, was abandoned at 170 feet as a result of the findings in the Hughes well, and has skidded rig to the SW SW SE of section 13 on the same permit. This puts it about one-fourth of a mile north and east of William E. Hughes Estate No. 13 Gramps, which was carried to the top of the Morrison and made 1,920 bbls. the first 24 hours swabbing and pumping.

Prospect Oil Syndicate No. 1-A Lena Garnett, SW SW SE sec. 13-33n-2e. Skdg. rig from No. 1 Garnett.
Cortez Oil Co. No. 1-A Crowley, NW SE NE sec. 2-32n-2e. Drlg. 260 ft. in sh.
Lafayette M. Hughes No. 14 Gramps, SW NW NW sec. 13-33n-2e. T.D. 2,260 ft.; W. in Dakota.

Bent County

Eastern Colorado had another disappointment this week when the Indian Territory Illuminating Oil Co. No. 1 E. A. Arbes, C Lot 2 (NW NE) section 2-21s-48w, in the Big Bend district, was plugged and abandoned at 5,651 feet in the Arbuckle. It had no commercial shows. In one horizon only was reported an odor of gas. The elevation is 3,936 feet. Top of the Pennsylvanian was at 4,765 feet. It made a Halliburton test at 4,780-90 feet, where a show of 38-gravity oil was reported in the cores, but with tester open 25 minutes it showed only 400 feet of drilling mud and traces of gas. It is understood that this ends the company's play in eastern Colorado. The office at Colorado Springs will be closed and its Montana and Wyoming operations will be conducted from Bartlesville, Okla.

Boulder County

J. B. Furstenberg No. 1 Foote, SE sec. 20-1n-70w. Drlg. 2,430 ft.
Boulder Prod. & Dev. Co. No. 11 Harlow Est., SE NE sec. 36-2n-71w. S.D.O. 765 ft.; dry in Muddy.

Fremont County

Utex Oil Co. No. 26, C SE SW section 20-20s-69w, in the south Florence field, was dry and abandoned at 2,730 feet. It was drilled for shale production in an area where affiliated interests (Travis-Raddatz) have a number of pumpers.

Garfield County

Roaring Fork Oil Co. No. 1 Patterson, C NE sec. 36-7s-88w. T.D. 492 ft.; W.O. pipe.

Huerfano County

S. W. Pressey No. 1 Ojo, SW NE sec. 10-29s-69w. T.D 3,550 ft. Cmtg. through gas flow.
S. W. Pressey No. 2 Alamo, C SW SE sec. 3-27n-68w. Spd. Sept. 10.

Kiowa County

Morgan & Flynn et al No. 1 Hostetter, C NW SE sec 6-20s-46w. Drlg. 5,335 ft. in L.

Larimer County

Great West O. & G. Corp. No. 1 Haworth, C SW SE sec. 16-4n-69w. T.D. 2,500 ft.; U.R. 8¼-in. to bottom.

LaPlata County

N. Spatter No. 1 Bryce, SE SW SW sec. 31-33n-9w. T.D. 410 ft.; rng. pipe.

Lincoln County

Consolidated Smelting & Metals Corp. No. 1 Hancock, NE NE SW sec. 7-17s-52w. T.D. 2,860 ft. in r.b.; U.R. 8¼-in. to bottom.
Gulf Oil Corp. No. 1 Smith, C SW SE sec. 19-15s-53w. Drlg. 2,876 ft. in sdy. sh.

Mesa County

Midwest Drlg. & Dev. Co. No. 1 Callahan, NE NW SE sec. 30-8s-97w. Drlg. 1,990 ft. in dry hole; rng. higher than Continental well 1 mi. to NW.
Continental Oil Co. et al No. 1 Miller, SW SW NW sec. 36-8s-91w. M.I.M.

Jackson County

Colorado Oil Ref. Co. No. 1 North Park Coal, NW NW sec. 18-9n-78w. Drlg. 2,960 ft.

Moffat County

Morapas Pet. Co. No. 1 Coles, SW SW SE sec. 1-3n-92w. Drlg. 2,135 ft. in sh.
Anderson-Kerr Drlg. Co. et al No. 1 Denise, C SE SE sec. 19-9n-99w. S.D. 2,500 ft.; W.O. rotary tools.

Morgan County

Swisher et al No. 1 Lunt, SE cor. sec. 3-4n-60w. T.D. 1,718 ft.; fsg. two strings tools and bailer.

Park County

South Park Oil Co. No. 1 State, SE SE SW sec. 16-11s-75w. T.D. 5,705 ft.; shot 110 qts. at 4,110-90 ft.; C.O. at 4,175 ft.
South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-76w. S.D. 5,210 ft.; M.I. 6¼-in.

Pitkin County

Glenco Dev. Co. No. 1 Govt., NW cor. sec. 9-10s-89w. T.D. 1,040 ft.; fshg. dropped 10-in.

Rio Blanco County

Utah Southern Oil Co., which has acquired a 50 per cent net interest in 4,480 acres on the Rangely dome for shallow sand production is beginning a drilling campaign. Its No. 1 Elsie A. Neal, C NW NE section 25-2n-103w, is completing as a producer of high-gravity shale oil at around 600 feet. Rig will be moved to location for No. 1 Gray on the H. W. Gray permit.

Utah Southern Oil Co. No. 1 Gray, NW sec. 19-2n-102w. Loc. (first report).
Buford Oil Co. No. 1 Govt., C SW SW sec. 16-1n-91w. Drlg. 860 ft. in blk. sh. and L.; top Penn. 260 ft.
Texas Co. and California Co. No. 1 Unit, SW SE NW sec. 35-3n-94w. Drlg. 5,880 ft. in hd. dk. sh.

WYOMING

Albany County

Murphy Oil Co. No. 10 Holst, SE SE NE sec. 13-17n-77w. Drlg. 1,570 ft. in gr. sh.
Ohio Oil Co. No. 1 Griffin, C SE SW sec. 2-21-77w. Drlg. 711 ft.
Murphy Oil Co. No. 9 Holst, NW SE NE sec. 13-17n-77w. Drlg. 2,912 ft. in gr. sh.
Wyco Oil Co., Inc., No. 1 Chappel, C NE NW sec. 33-21n-76w. Ran 725 ft. of 5-in. to top of Wall Creek; swbg. drlg. W.
Wyco Oil Co., Inc., No. 2 Chappel, NE NE NW sec. 33-21n-76w. Cmtd. 8¼-in. at 243 ft.; drlg. plg.

Big Horn County

Woods-Callahan Oil Co., Ltd., No. 1 Evans, NE NE

3 BLADE CUTTER ACTION

MEANS Stabilized SCRAPING

Note in the above illustration how the three blade cutting principle of the MacClatchie Wall Scraper distributes the load *evenly* on all sides of the drill string. This is the secret of MacClatchie's outstanding performance — a stabilized cutting action that gives you . . . .

. . . *smooth easy rotation* that protects your drill string from twist-off strains.

. . . *more full-gauge hole* per run because there is less load per cutter.

. . . *perfectly cylindrical walls* because there is no wobble, no vibration, and no tendency for scraper to whip.

Triple cutter action is just *one* of MacClatchie's engineered features. Tremendous Body Strength . . . Positive Cutter Expansion and Retraction . . . Double Action Circulation . . . Wide Range Scraping Capacity . . . these are other performance points that place it at the top for efficiency and absolute dependability!

The smooth action and wide reach of the MacClatchie Scraper make it the outstanding choice for the new "gravel bed method" of setting liners. Your nearest MacClatchie representative will gladly give complete information. Contact him today!

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NW section 12-49n-91, Paintrock dome, which was reported abandoned last week at 2,300 feet in the Madison lime when drillers were unable to shut off water, flowed 100,000 bbls. of sweet water per day, according to Robert Hume, superintendent. This is said to be one of the largest water wells in Wyoming. However, it does not hold the record for the Rocky Mountain area. Oasis Cotton Co. drilled a well several years ago south of Roswell, southeastern New Mexico, for which the record is claimed. It made 5,710 gallons a minute with about 35 pounds pressure at the surface, or at the rate of 195,768 bbls. per day.

Ohio Oil Co. No. 3 Sidon Canal, NW SW (Lot 40) sec. 24-56n-97w. Bldg. road.
Ohio Oil Co. No. 1 Pryde, C SW SE sec. 24-56n-97w. T.D. 6,060 ft.; will P.B. to 5,760 ft. and cmt. 7-in. at 5,727 ft.
Yale Pet. Corp. No. 1 Stock-Jones, SE cor. sec. 52-56n-97w. T.D. 4,050 ft.; drlg. by D.P.
Joan Oil Co. No. 1 Howell, sec. 32-55n-97w (Lot 63). T.D. 1,150 ft., U.R. 12½-in.
Peay Oil Co. No. 1 Denio, Tr. 43-C, sec. 15-55n-97w. T.D. 3,930 ft.; fsg.

Campbell County

Powder River O. & G. Co. No. 1 Rhodes, NE SE NW sec. 24-49n-79w. Cmtd. 12½-in. at 650 ft.

Carbon County

Ohio Oil Co.-California Co. No. 6 Union Pacific-Cronberg, CEL SW SE sec. 23-21n-79w. Cellar (first report).
Ohio Oil Co. No. 12 H.&C., SE SW sec. 35-20n-78w. T.D. 345 ft.; 11⅝-in. at 107 ft.; W.O.C.
Sinclair-Wyoming Oil Co. No. 11 Wertz, SE NW NW sec. 7-26n-89w. Drlg. 5,071 ft. in r.b.
Ohio Oil Co. No. 1 Wyo. O. & G. Co., C SE SW sec. 29-27n-89w. T.D. 1,488 ft.; cmtd. 4⅞-in. at 1,220 ft.; tstg.
Producers Oil Co. No. 1, CNL sec. 14-20s-88w. Drlg. 194 ft.
Ohio Oil Co.-California Co. No. 5 Cronberg-U.P., C NW NW sec. 25-21-79w. Cg. 5,509 ft.; top Muddy 5,065 ft.
Ohio Oil Co. No. 1 Union Pacific, C NW NW sec. 20-21n-80w. Drlg. 4,305 ft.; out of Shannon at 4,050 ft.
Ohio Oil Co.-California Co. No. 3-A Kyle, C SW NE sec. 26-21n-79w. Cg. 5,589 ft.; top Muddy 5,138 ft.
Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78w. T.D. 2,347 ft.; P.B. to second Sundance at 2,140-80 ft.; shot with 40 qts.; tstg.

Converse County

Ainsworth Oil Co. No. 1 Marberger, NE SE NE sec. 34-32n-69w. Rig. Contr. to H. W. Conley to go 800 ft.; Shawnee dist.
Hall-Thornton et al No. 1 Roth, C NW SE sec. 13-32n-69w. S.D. 240 ft. for csg.
Wyoming Southern Oil Co. No. 1 Lane, C NW NE sec. 27-32n-69w. Spd. and S.D.
Elbe Oil Ld. & Dev. Co. No. 1 Benham, NW NE sec. 5-31-70w. M.I.M.
Tom Carney No. 1 Beaver, SE SE SW sec. 28-35n-68w. M.I.M.
Chadron-Osage Oil Co. No. 1 State, SW cor. sec. 16-32n-69w. T.D. 4,040 ft.; prep. to run 8¼-in.
Wyoming-Southern Oil Co. No. 3 Salisbury, NE NE SE sec. 27-32n-69w. T.D. 540 ft.; lost tools; skidded rig 25 ft.
Chadron-Osage Oil Co. No. 1, SW NE NE sec. 27-32n-69w. Loc.; shallow gas well.

Fremont County

Stanolind O. & G. Co. No. 1 Govt., C SE SE sec. 3-33n-96w. R.U.R.
Sinclair Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. Cg. below top of Madison at 8,097 ft.
H. Kenyon Burch No. 1 Enos, CEL NE NE sec. 28-3n-1w. S.D.O. 970 ft.; no shows.
Ben Stewart No. 1 Darnell, NE SE sec. 26-3n-1w. Drlg. 500 ft.; 8¼-in. at 475 ft.

Hot Springs County

Italo Pet. Corp. No. 1 Phebus-Govt., NW NW SW sec. 11-44n-98w. Drlg. 400 ft.
Oscar B. Grace No. 4 Govt., CNL SE NW sec. 21-43n-92w. Drlg. 378 ft. (Kirby Creek).

Lincoln County

H. M. Eller et al No. 4 Govt., SE NW SW sec. 32-19n-116w. T.D. 401 ft.; will test S.O. in lenticular sd. at 397-401 ft.
Place Oil Co. No. 1 Davis, SE SE SE sec. 9-26n-11w. T.D. 1,228 ft.; set pipe on top sat. zone at 1,212 ft.; tstg.

Natrona County

Stanolind O. & G. Co. No. 11 Wyo. Asso.-Tensleep, C NE NW sec. 35-40n-79w. Drlg. 1,539 ft. in sh.
Stanolind O. & G. Co. No. 29 Wyo. Asso.-Tensleep, C SW SW sec. 26-40n-79w. Cmtd. 16-in. at 210 ft.; W.O.C.
General Pet. Corp. No. 1 Govt., C NW SE sec. 21-35n-77w. R.U.R.

Niobrara County

Ohio Oil Co. No. 9 Putnam, C NE NW sec. 4-35n-65w. R.U.R.
Lewis Goekel No. 1 NE SE NW sec. 31-35n-62e. Resumed drlg. 1,550 ft.
J. M. Huber Corp. No. 3 Joss, NE NE SW sec. 6-35n-65w. Rigged; W.O. tools.
Continental Oil Co. No. 3 Apex-1, SE SE NE sec. 34-36n-65w. Drlg. 3,770 ft.
W. A. Maupin et al No. 1 Berggren, NW sec. 23-35n-63w. Rdy. to spd.
J. M. Huber Corp. No. 2 Lamb, NE SE SW sec. 27-36n-65w. Drlg. 3,820 ft.
Continental Oil Co. No. 5-B Schuricht, C SW SW sec. 5-35n-65w. T.D. 5,150 ft.; D.P. stuck.
Ohio Oil Co. No. 2 Taylor-O.P.C.-32, NW NW SW sec. 3-35n-65w. T.D. 5,611 ft. in Minnelusa; ran 50 sacks cmt. to prevent caving.
Ohio Oil Co. No. 2 Leo-O.P.C., NE NE SE sec. 35-36n-65w. R.U.R.
Ohio Oil Co. No. 1 Leo-O.P.C.-7, NW NW SE sec. 35-36n-65w. T.D. 5,657 ft.; top Minnelusa 5,630; cmtd. 9⅝-in. at 5,596 ft.
Continental Oil Co. No. 1 Leach, SW NE NE sec. 29-36n-64w. Drlg. 3,939 ft.; unofficially reported 2,500,000 ft. gas in Muddy.
Argo Oil Co. No. 4 Ford, SW NW SE sec. 33-36-65w. Cg. 5,810 ft. in Minnelusa.
A. B. Cobb and Holly Dev. Co. No. 2 Novick, SE SE SW sec. 9-35n-65w. T.D. 3,305 ft.; prep. to test.
Continental Oil Co. No. 10 Tom Bell Cattle, C SW NW sec. 34-36n-65w. T.D. 6,265 ft.; prep. hole for Schlumberger test.
Continental Oil Co. No. 8 Otto Rohiff, SW SW SE sec. 31-36n-65w. T.D. 4,025 ft.; prep. to swb.
MacKinnie Oil & Drlg. Co. No. 2 Thompson, NW NW NE sec. 7-35n-65w. S.D. 4,064 ft.; Sundance at 4,049-64 ft.; dry.

Park County

Resolute Oil Co. No. 1 Northern Pacific, C NE NW sec. 21-57n-101w. Drlg. 4,973 ft.
Resolute Oil Co. No. 1 Govt., C NE NE sec. 20-57n-101w. Drlg. 8,083 ft.
Ohio Oil Co. No. 15 Woods, O.P.C.-3, NW SE sec. 30-58n-99w. Drlg. 1,511 ft.

Platte County

Dividend O. & R. Co., Inc., No. 1, CSL NW SW sec. 17-24n-66. Drlg. gr. sd. 3,414 ft.

Sublette County

Texas Co. No. 3-I, SE NW NW sec. 27-27n-113w. Drlg. 380 ft.

Sweetwater County

Mountain Fuel Supply Co. No. 1 Charles Stone, C SW SW section 18-19n-103w, an outside well on the southeastern flank of North Baxter Basin, which had 3,000 bbls. of water per day in the Lower Sundance, at 4,546 feet, total depth, plugged back to test show of gas in Upper Sundance at 3,800 feet. Show was not commercial and well will again be deepened to the water sand and completed as a water well for field uses. The location is a northeast offset to same company's No. 1 Arnold, NE cor. section 24-19n-104w, which was drilled to 3,550 feet, where it ran into water in the Lower Sundance and was plugged back to 3,525 feet and completed for 3,800,000 feet a day.

Italo Pet. Corp. No. 1 Govt., SW SW SW sec. 36-13n-95w. Drlg. below 610 ft.
Sinclair-Wyoming Oil Co. No. 77, SE NE NE sec. 10-26n-90w. Spdg.
Mountain Fuel Supply Co. No. 1 Union Pacific, C SW SE sec. 13-17n-104w. Cmtd. off cave at 3,330 ft.; W.O.C.

Uinta County

E. A. Ottman et al No. 1 Govt., C SE NW sec. 26-14n-110w. T.D. 1,010 ft.; prep. to run 10-in.
Mountain Fuel Supply Co. No. 1 Williams, C NE NE sec. 5-12n-95w. Drlg. 1,150 ft.
Mountain Fuel Supply Co. No. 1 Union Pacific, C SE NE sec. 29-15n-104w, S of Baxter Basin. Loc.

Weston County

John Brorphy No. 1 George, SW SE NW sec. 26-48n-64w. Drlg. 1,120 ft. in r.b.
Chas. Goodell et al No. 1 State, C NE NE sec. 23-44n-63w. Ready to spud.
Mush Creek Oil Co. No. 1 Carmine, SE SW sec. 31-44n-62w. Drlg. 100 ft.
Le Faivre Oil Synd. No. 1 Martin, NW NW SW sec. 29-45n-68w. Drlg. 2,550 ft.; will U.R. 10-in. at 2,130 ft. for W.S.O.

MONTANA

Big Horn County

E. L. Dana No. 1 Hardy, SW NW sec. 22-9s-35e. T.D. 500 ft. in Claggett; U.R. 8¼-in.
Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. S.D. 4,120 ft. (C.D.); H.F.W.

Carbon County

Miracle Oil Co. No. 2, CWL NE SE sec. 3-6s-23e. Drlg. 1,495 ft.
R. C. Tarrant No. 1 Heare, CWL NE NW sec. 14-6s-19e. Drlg. 1,065 ft.
Ohio Oil Co. No. 16 Kirt, C SE SE sec. 4-7s-21e. Drlg. 5,737 ft.
Geo. Muth et al No. 1, CSL SE SE sec. 23-6s-23e. S.D. indef. at 1,500 ft.
Henderson Prod. Co. No. 1-H-11 Elk 11, SE SE NW sec. 35-9s-23e. S.D. 1,619 ft. for water.

Choteau County

Security Pet. Co. No. 1 Johnson, NE sec. 23-26n-3e. Drlg. 1,800 ft.

Cascade County

C. Leonard Smith No. 1-A Smith-Schwingle, NE NE SW sec. 14-22n-2e. T.D. 750 ft.; fshg. tools.

Fallon County

Johnson-Burke No. 1 Govt., SE NE SE sec. 6-8n-79e. Drlg. 1,200 ft.

Glacier County

The Texas Co. announced that it will produce its offset wells in the Cut Bank and Kevin-Sunburst fields the coming months in the same proportion as those of its neighbors. Where offsets to Texas Co. wells are pumping at capacity, its wells will also be produced to capacity. Where offsets are cut to 50 per cent, it will do likewise, and same rule will apply where offsets are shut in. This step is in anticipation of seasonal curtailment of production.

Cut Bank had three completions and two new operations.

Glacier Production Co. No. 1 Newell Unit, SE SE NW section 13-33n-5w, was completed at 2,703 feet for 14,300,000 feet of gas per day with tools in the hole. The Sunburst sand at 2,635-54 feet was estimated at 5,000,000 feet a day before casing off. The Cut Bank sand was at 2,658-2,703 feet.

Glacier Production Co. No. 3 Fuller, SE SE SE section 17-33n-5w, swabbed 51 bbls. the first 16 hours from the Cut Bank at 2,934-87 feet. The Sunburst at 2,912-20 feet had a show of oil. Bottom of hole was enlarged to 12½ inches with Roe underdigger.

The Texas Co. No. 7 Mabel Morrison, CEL SW SE section 22-35n-6w, swabbed 75 bbls. the first 12 hours and pumped 45 bbls. the first 24 hours at 2,922 feet. The Cut Bank sand was at 2,850-2,910 feet.

Glacier Prod. Co. No. 1 Forbes Unit, C SE NW sec. 4-34n-5w. R.O.G. (first report).
Glacier Prod. Co. No. 3 Coburn, NE NE NW sec. 8-33n-5w. Loc. (first report).
Glacier Prod. Co. No. 1 Bickett Unit, 2,640 ft. W of E line and 2,480 ft. N of S line, sec. 14-34n-5w. Spdg. 100 ft.
Montana Headlight Oil Co. No. 9 Yunck, NE SW NW sec. 1-34n-6w. T.D. 2,300 ft.; fshg. tools.
Montana Headlight Oil Co. No. 10 Yunck, C SW SE sec. 1-34n-6w. Drlg. 2,650 ft.
Texas Co. No. 1 Curren, C SE SE sec. 5-32n-5w. Drlg. 2,330 ft.
Texas Co. No. 5 Tribal-121, C SW SE sec. 36-33n-6w. Drlg. 3,047 ft.
Texas Co. No. 3 State (M-455), C NE NW sec. 16-32n-5w. Drlg. 2,990 ft.
Lawler-Hoer No. 2 Downen, SW SE SW sec. 9-33n-5w. Drlg. 2,030 ft.
Indian Oil Co. No. 3 Haglund Sr., C SW NW sec. 13-34n-6w. Drlg. 2,480 ft.
R. C. Tarrant No. 6 Long-Miller, C SW NW sec. 24-34n-6w. T.D. 2,290 ft.; fshg.
Drumheller Oil Trust No. 1 fee, C NE SW sec. 17-34n-6w. T.D. 2,700 ft.; drlg. by at 2,640 ft.
A. R. Pardee No. 1 Anderson, C SE SW sec. 31-32n-5w. S.D. 2,900 ft.

Outside Cut Bank

W. E. Ullman No. 1 Allotted, C SW sec. 35-36n-8w. Cg. 3,820 ft.

Hill County

Nadeau Bros. No. 1 O'Neal, NW NW NW sec. 34-32n-17e. Drlg. 1,300 ft.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15e. Drlg. 1,721 ft.

Park County

Ben W. Ryan et al No. 1 Brugess, SE SW NW sec. 28-2s-11e. Drlg. 830 ft. after installing heavier equip.

Petroleum County

O. B. Canfield No. 1 Govt., CEL SE NE sec. 21-17n-24e. Drlg. 765 ft.

Roosevelt County

John W. Schmidt et al No. 1 Freu, NW NW NE sec. 21-28n-50w. Drlg. 700 ft.

Toole County

There was one completion and five new operations in the Kevin-Sunburst field and one well abandoned and one new operation outside of that area.

The California Co. No. 6 Neuman, NE NW NE section 23-35n-2w, was completed in the contact at 1,472 feet and made 10 bbls. per day naturally.

In the Bow and Arrow district Coolidge & Coolidge No. 1 Kielbaugh, C NW SE section 13-37n-1w, was abandoned at 425 feet as being off structure. Same firm made location for its No. 2 Clark, a west offset to No. 1 Clark, the discovery well, following a geophysical survey by the Helland Co.

H. F. Patterson No. 2 Elwell, NE SE NW sec. 22-35n-3w. Spdg. (first report).
Hamilton & Hamilton No. 4 Reeg, SE SW SE sec. 14-35n-2w. Drlg. 135 ft. (first report).
Gray Superior No. 4 Aronow, NE SW SW sec. 12-35n-3w. Spdg. (first report).
Rice Oil Co. No. 1 Larson, NW NW NW sec. 18-35n-3w. Drlg. 840 ft. (first report).
Vander Pas & Montgomery No. 1 Thumm, NW SW NW sec. 33-35n-3w. Drlg. 250 ft. (first report).
Henry Vander Pas No. 1 Ward, SE SE NE sec. 28-35n-3w. Drlg. 1,240 ft.
Treasure State Oil Co. No. 5 Shaw, NW SE NE sec. 35-36n-2w. T.D. 1,500 ft.; fshg.
Guy Smith No. 1 Govt., C NE SE sec. 35-36n-3w. Spd. 10 ft. and S.D.
Consolidated Gas Co. No. 2 Lutz, C SE NE sec. 33-33n-2w. Drlg. 1,425 ft.
G. & A. Oil Co. No. 10 Geoddertz, NE SW SW sec. 23-35n-3w. Drlg. 1,130 ft.
A. H. Blaze No. 6 Burwash, SW NW SW sec. 15-34n-1w. Drlg. 900 ft.
A. E. Crumley & Sons No. 10 Fryberger, SW NE SE sec. 24-35n-3w. Drlg. 1,591 ft.; contact 1,590; 200 ft. oil.
Pfabe & Engleking No. 1 Innerberg, NW SE SE sec. 26-35n-4w. Drlg. 1,900 ft.; 300,000 ft. gas in Sunburst.
M. W. Cassidy No. 1 Mary, CEL NE NW sec. 5-34n-3w. Drlg. 1,500 ft.; Sunburst 1,430-50 ft., dry; S.G.
Welch Bros. No. 1 Ward, C SE NE sec. 29-35n-3w. Drlg. 1,670 ft.
E. O. Reickhoff No. 3 Baum, SW SW SE sec. 3-35n-3w. S.D. 110 ft.
C. T. Olen No. 7 Engemoen, C NW NW sec. 14-35n-2w. T.D. 1,607 ft.; contact 1,591 ft.; stdg.
C. L. Tomlinson No. 1 Davidson, NW NE SE sec. 28-35n-3w. S.D. 1,500 ft.
California Co. No. 7 Neumann, NW NW NE sec. 23-35n-2w. Drlg. 550 ft.
McCurdy No. 1 Holloweil, C SE SW sec. 1-35n-3w. Drlg. 1,300 ft.
Capitol Oil Co. No. 1 Pace, C SE SW sec. 27-36n-1w. Drlg. 2,095 ft.
Bryant Bros. No. 1 Lashbaugh, NE SW NW sec. 34-25n-2w. T.D. 850 ft.; R.U. heavier mach. to resume.

Outside Kevin-Sunburst

Model Oils, Inc., No. 1 Fey, NE SW sec. 5-37-3w. T.D. 2,100 ft.; cmtg. off W.
Coolidge & Coolidge No. 2 Clark, C SE SW sec. 24-37n-1w. R.O.G. (first report).

Yellowstone County

Broadview Dome Oil Co. No. 1, NE NE SW sec. 18-3n-23e. Drlg. 2,800 ft.
Laurel Oil Co. No. 1, C NW SW sec. 7-2s-24e. R.U.
Riverto Oil Co. No. 1 Fox, CEL NW NE sec. 14-2n-23e. S.D. 1,041 ft. for supplies; (formerly Western Dakota Oil Co.).

(Continued on Page 76)

North Louisiana, Arkansas

By MITCHELL TUCKER

SCHULER'S NEW PRODUCING HORIZON YIELDS BIG FLOW

SHREVEPORT, La., Sept. 27.—The Schuler field, Union County, Arkansas, still held the center of attention last week when a new producing horizon was proven in testing E. M. Jones No. 1 Marine Oil Co., section 17-18s-17w. The casing was perforated at 7,554-71 feet (original total depth 7,616 feet). On a 24-hour gauge the well produced 2,480 bbls. of net oil, plus 20 per cent salt water, through a 2-inch tubing choke. The gravity of the oil has increased and is now 32.6 degrees.

Estimated Daily Production

Estimated daily gross production all companies week ending September 25, follows:

NORTH LOUISIANA

Bellevue	720
Caddo light	3,840
Caddo heavy	2,710
Converse	790
Cotton Valley heavy	375
Cotton Valley light	*3,545
DeSoto and Red River	1,510
Elm Grove	405
Haynesville	3,015
Holly	115
Homer	2,480
Lisbon	13,605
Pleasant Hill	120
Rodessa	50,945
Sarepta-Carterville	315
Sligo	425
Sugar Creek	420
Urania	2,740
Zwolle	770
Total	88,845

SOUTH ARKANSAS

Champagnolle	1,360
El Dorado	1,950
Lisbon	280
Miller County	435
Nevada	740
Rodessa	4,405
Schuler	8,100
Smackover light	2,130
Smackover heavy	16,905
Stephens	590
Troy	565
Urbana	1,225
Total	38,685

Texas side of Rodessa field 32,935 bbls. daily.

*3.095 bbls. is distillate.

RODESSA—ARKANSAS

In the Miller County, Arkansas, portion of the Rodessa field, 26 wells are either drilling or rigging up to drill. Two new permits were issued by Arkansas Board of Conservation. At the close of the week there were 13 wells with a daily average production of 4,405 bbls., or 338 bbls. per well. F. W. Burford added three completions to the field, namely: No. 1-B A. A. Capps, NE cor. SE SE section 11-20-28, flowed 50 bbls. per hour through 1-inch tubing choke on completion test, after being acidized from a total depth of 6,091 feet; No. 3 Eason, NE cor. NE NE section 11-20-28, flowed approximately 1,000 bbls. daily through 1-inch tubing choke, after being acidized at a total depth of 6,075 feet and No. 1-B G. G. Gerrald, NE cor. section 15-20-28, flowing at the rate of 30 bbls. per hour through 1-inch tubing choke, total depth 6,033 feet.

Holcomb & Thomasson No. 1 Dillon, SE cor. section 4-23-16, Rodessa, Louisiana, gauged 145 bbls. in 24 hours through a quarter-inch tubing choke from a depth of 6,018 feet.

R. W. Norton No. 12 Starke, NW cor. section 17-23-16, produced 225 bbls. in 24 hours through a quarter-inch tubing choke on completion test, total depth 5,983 feet.

United Gas Public Service Co. No. 5 Starke, SE cor. section 8-23-16, produced 175 bbls. in 24 hours through a 12/64-inch tubing choke on completion test, total depth 6,000 feet.

In the Cass County, Texas, part of the Rodessa field, R. W. Norton No. 2 Hussey, P. Evans Survey, flowed approximately 90 bbls. daily through quarter-inch tubing choke, total depth 6,118 feet. In Marion County, Mid-Continent Petroleum Co. No. 3 Sory, A. D. S. Coy Survey, flowed at the rate of 300 bbls. daily through a three-sixteenths inch tubing choke. The casing was perforated from 6,037 feet to 6,048 feet, total depth 6,057 feet.

LOUISIANA

Bienville Parish

H. L. Hunt and Seaboard Oil Co. No. 1 Commercial Real Estate Corp., NE NW section 3-16-6, the second test in the Bearcreek field, on completion, tested 1,000,000 feet of gas and 25 bbls. distillate per day through one-eighth inch tubing choke. The casing was perforated at 6,765-80 feet, total depth 6,801 feet.

Claiborne Parish—Lisbon Field

The Lisbon Oil Co. No. 1 Burgis, section 3-20-5, 1¼ miles southwest from Lisbon production, was shut in after filling all available storage, and when opened it would not flow. The well was swabbed approximately eight hours and made a few small heads of oil, approximately 5 bbls. to a head. It was then allowed to stand open for several hours and fluid rose within 900 feet from top of casing. Swabbing will continue.

During the past week the Gulf Pipe Line Co. ran 95,000 bbls. of oil from this field, a daily average of 13,570 bbls. There were five completions in the field last week.

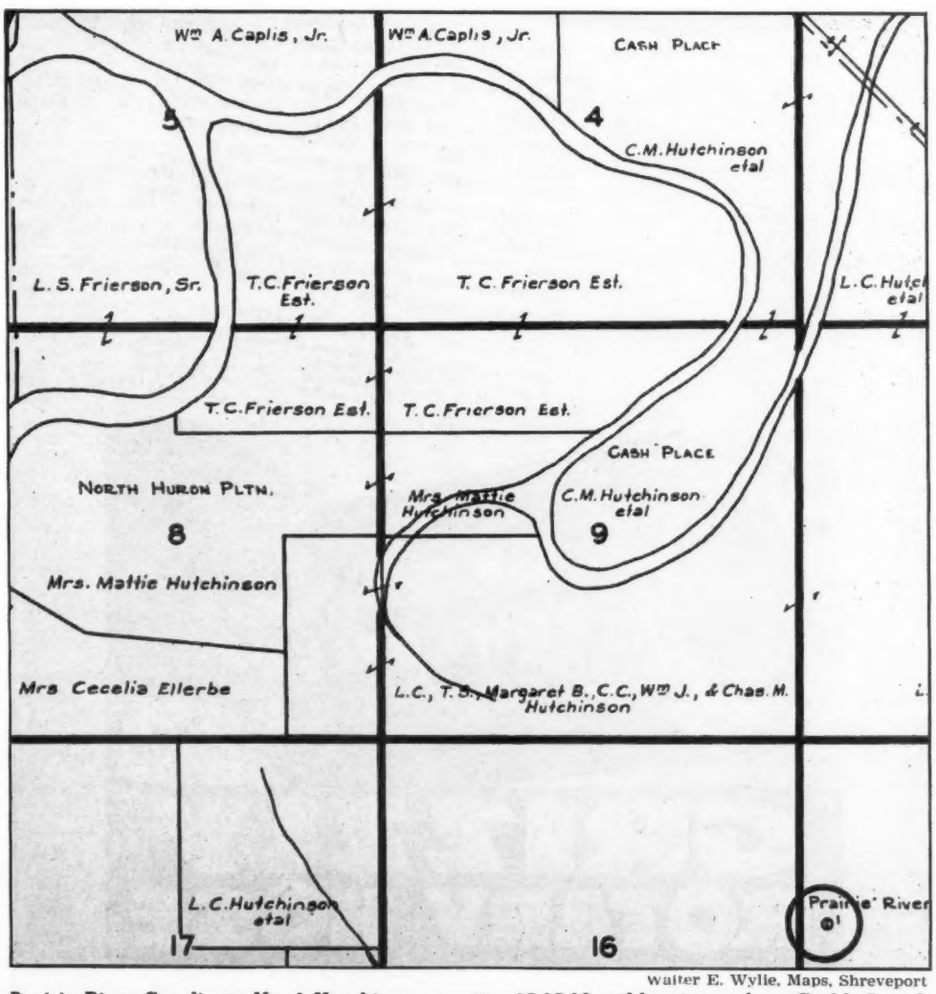
Atlantic Refining Co. No. 4 F. B. King and others, SE cor. section 35,21-5, flowed 45 bbls. hourly through three-fourths inch tubing choke, total depth 5,223 feet.

Harry Hanbury No. 2-B R. Vaughn, NW cor. SW SE section 25-21-5, flowed 90 bbls. hourly through a three-fourths inch tubing choke after being acidized from a total depth of 5,262 feet.

Magnolia Petroleum Co. No. 4 H. E. Patton, SE cor. SW section 36-21-5, flowed 27 bbls. hourly through a half-inch tubing choke, after being acidized from a total depth of 5,281 feet.

Standard Oil Co. of Louisiana No. 4 F. B. King and others, SW cor. SE NE section 35-21-5, flowed 61 bbls. hourly through 1-inch tubing choke, total depth 5,304 feet.

Sloan & Zook Co. No. 2 H. W. & M. Patton Estate,



Walter E. Wylie, Maps, Shreveport

Prairie River Syndicate No. 1 Hutchinson, section 15-15-12, wildcat in southern Caddo Parish, which indicated a possible gas-distillate producer on a drill stem test at a total depth of 9,024 feet. The well is drilling and coring ahead in the sand

NE cor. NW section 1-20-5, flowed 170 bbls. daily through 12/64-inch tubing choke after being acidized from a total depth of 5,261 feet.

In the Lincoln Parish portion of Lisbon, Lyons and Neely No. 1-B H. E. Patton, NE cor. NE SW section 6-20-4, flowed 20 bbls. hourly through a three-fourths inch tubing choke after being acidized from a total depth of 5,367 feet.

J. E. Burford No. 1 Hanna, SE cor. SW SE section 34-18-4, located approximately 1¼ miles north of Herman L. Brown No. 1 Gardner, gas-distillate well in section 10-17-4, tested 2,500 feet of salt water in 15 minutes from a drill stem test 6,519 to 6,535 feet. The well was drilled to 6,612 feet and abandoned.

De Soto Parish

F. F. McMannaon No. 1 Cook Land Co., center section 16-10-11, was dry and abandoned, total depth 3,514 feet.

Caddo Parish

W. J. Hunter and others No. 1 Stoer, section 10-15-15, a wildcat near Keithville, was completed, estimated 2,000,000 feet of gas and 10 bbls. of distillate daily, and a spray of salt water, total depth 5,120 feet.

The deep wildcat test at Caspiana, Prairie River Syndicate No. 1 Hutchinson, SW NW section 15-15-12, tested dry in a drill stem test from 8,989 to 9,024 feet. Coring will continue.

In the Caddo field, section 26-21-16, Ardsell Oil Co. and others completed its No. 2 Muslow, estimated at 2,000,000 feet of gas, with a spray of oil, total depth 950 feet.

Franklin Parish

Tensas Delta Oil Corp. No. 1 Woodland, NE cor. section 22-11-9, was dry and abandoned, total depth 6,500 feet.

Union Parish

J. & H. Oil Co. No. 4-B Frost Lumber Co., SE cor. SW section 10-21-3, completed, gauged 640,000 feet of gas from a total depth of 2,235 feet.

ARKANSAS

Columbia County

Standard Oil Co. of Louisiana No. 1 McKean, SW cor. section 8-16-22, tested 1,000 feet of fresh water and 1,350 feet of salt water in a drill stem test from 6,185 to 6,387 feet. It is drilling ahead.

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GRIZZLY CUB RED LINE for 7,500 lb. pressures
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POWERFUL
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A BEAR FOR WEAR
GRIZZLY ROTARY HOSE

Rocky Mountain Areas

(Continued from Page 74)

UTAH

Carbon County

Kelly Young No. 1, NE NE SE sec. 30-14s-10e. Drlg. below 1,100 ft.

Daggett County

Mountain Fuel Supply Co. No. 1 Smith, C SW NE sec. 30-3n-24e. Drlg. 3,200 ft.

Grand County

Reference was made in this column several weeks ago to the blowout in the No. 1 Shaffer well, which was drilled a number of years ago, on Cane Creek. F. W. Strong was named as president of the Cane Creek Oil Co., which is drilling an offset, by mistake. H. L. Rath is president of the company. Mr. Rath says the first survey of the structure was made by him in 1920 when he triangulated in there from a section corner in the Moab Valley, thereby locating the position of the axis of the anticline by calculation, then describing the lands and filing the applications in the names of Frank and John L. Shaffer covering the crest of the anticline. He differs with the theory that the discovery was of oil that had migrated through a fractured zone, and says that it is a closed structure, the closure on the short side being about 650 feet.

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. S.D. 6,715 ft.; M.I. heavier rot. equip.
Columbia Crude Corp. No. 1 Rath, NW SW SE sec. 12-25s-20e. Drlg. 2,334 ft.
Cane Creek Oil Co. No. 1 Govt., NW SW sec. 31-26n-21e. Drlg. 350 ft.

NEBRASKA

Sioux County

J. M. Huber Corp. and United Producers, Inc., No. 1 Morgan, C SW SW sec. 32-35n-56e. Drlg. 3,030 ft. in Upper Sundance.

Catalytic Reactions at High Pressures and Temperatures

Dealing with the author's researches in the field of organic catalysis at high temperatures and pressures, "Catalytic Reactions at High Pressures and Temperatures," by Dr. Vladimir N. Ipatieff, offers a valuable source of information to all petroleum technologists interested in hydrogenation and polymerization. The dominate feature of the book is pressure, for only by application of high pressure is it possible to hydrogenate completely and obtain products free from traces of starting material.

The book is primarily a collection and review of Ipatieff's work during the past 35 years, or as he called it, his "chemical autbbiography." For that reason, he has made no attempt to collect the literature of the subject or to include the work of others, except where it is seemed desirable to emphasize and develop certain features, or where it bore his own researches.

Containing 786 pages, the volume is divided into 13 chapters as follows: Dehydrogenation, Dehydration of Alcohols, Catalytic Decomposition of Acids, Catalytic Isomerization, Hydrogenation, Joint Action of Catalysts (Promoters), Hydrogenation of Aromatic Amines and Metallo-Organic Compounds, Destructive Hydrogenation of Organic Compounds, Catalytic Condensation, Theoretical Principles for Catalytic Reactions, Polymerization. Alkylation in the Presence of Various Catalysts. and Destructive Alkylation. An appendix includes two previous published papers; one on polymerization as a new source of gasoline, and gasoline from ethylene by catalytic polymerization.

"Catalytic Reactions at High Pressures and Temperatures" may be purchased through the Book Department of The Oil and Gas Journal at the regular established price of $7.50, express prepaid (postage extra outside the United States). Where payment does not accompany order, the book will be sent express c.o.d. to avoid delay.

Oklahoma Operations

By
DAL DALRYMPLE

FIVE NEW PRODUCING FIELDS OPENED; KAY TEST SHOWING

Four of five wildcats completed in Oklahoma the past week opened oil producing areas, while the fifth outpost uncovered new gas production, making the best record of discovery for this state in many months. Other features of the week included completion of more big producers and extensioners in the Billings pool of Noble County, the southwest trend of the Lucien pool in Logan County apparently was defined, Hunton lime production was uncovered in Coal County and the opening of a new pool in Kay County was indicated.

More exploration for the southeast edge of the Billings field was assured by the showing of Phillips Petroleum Co. and Shell Petroleum Corp. No. 4 Hackett, SW SE SE section 21-23n-2w, which had potential of 4,229 bbls. of oil at total depth of 4,333 feet in Wilcox sand. It was not listed as a completion of the past week, but three other wells were completed in the pool, including a north extension.

Further development along the southwest trend of the Lucien field in Logan County appeared limited as a result of the failure of Mid-Continent Petroleum Corp. No. 2 Bulling, SE NE NE section 5-19-2w, which proved a fault in that sector and was shut down at 5,106 feet. It was expected to be abandoned.

Carter Oil Co. No. 1 Buck, section 6-1n-8e, east of the Jesse pool of Pontotoc County but across the line in Coal County, flowed 215 bbls. of oil in 23 hours from Hunton lime at total depth of 4,002 feet in the lime. It was the first production from Hunton lime for Coal County.

E. J. Shaffer and others No. 1 Hunchild, SW cor. section 8-28-1w, wildcat near the old Braman field in Kay County, apparently was opening a new Wilcox sand pool. At total depth of 3,513 feet in Wilcox sand gas blew the tools up the hole and bridged at 300 feet off bottom. When bridge was cleared, bailer was run and 1,000 feet of oil was in the hole. It made a small flow and operators were testing.

W. J. Armstrong, chief conservation officer for the Corporation Commission, has recommended that the production allowable for Oklahoma fields be held at 600,000 bbls. daily in October, the same amount as allowed during September. The Bureau of Mines estimate for Oklahoma in October was 629,200 bbls. daily.

Wildcat Completions

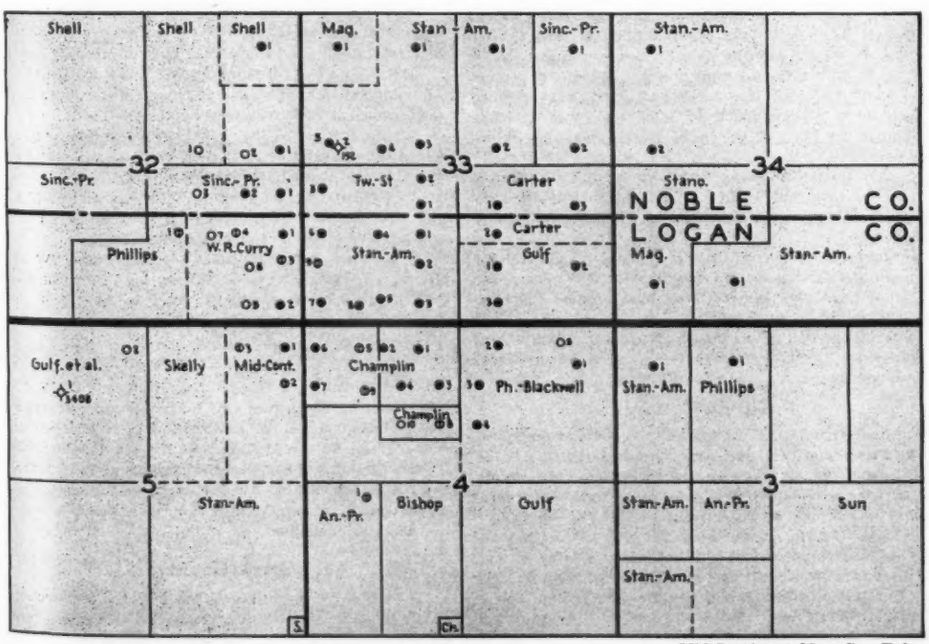
Four wildcats that opened new oil producing areas and one that uncovered gas production were completed in Oklahoma the past week.

Carter Oil Co. No. 1 Harley, C NE NE section 24-2s-4w, deep pay discovery in the Milroy area, southeastern Stephens County, was completed, flowing 1,790 bbls. of oil in 16 hours after acidizing. It flowed 2,770 bbls. of oil, with 32,000,000 feet of gas, through tubing in 25 hours. Gravity of the oil was 54 degrees. Production was from Oolitic lime, topped at 7,554 feet, total depth 8,157 feet. Top of Hunton lime was 4,344 feet, Viola lime 5,152 feet, Simpson formation 6,060 feet, Bird-eye lime 7,480 feet.

Another southern Oklahoma pool opener was completed at Indian Territory Iluminating Oil Co. and others No. 1 Graham, SW NW NE section 1-3s-19w, Tillman County. It had pay at 3,073-81 feet, total depth, and flowed 506 bbls. of oil daily through tubing. Top of Canyon lime was 3,070 feet.

L. B. Jackson No. 1 Alberty, NE NE NW section 25-18-9, in northern Creek County, had Wilcox sand at 4,966-74½ feet, total depth, and flowed 180 bbls. of oil daily through 2-inch tubing, completed. The wildcat has Mississippi lime at 2,680-2,928 feet, topped Burgess sand at 2,658 feet, Chattanooga shale 2,928 feet, Dolomite 2,955 feet and Dense 2,948 feet.

Carter Oil Co. and others No. 1 Crisman, C W½ SW NW section 16-25-3w, was completed in Wilcox sand at 5,400-10 feet, total depth, flowing 756 bbls. of oil and 322 bbls. of water in 24 hours on completion test. On earlier flow tests it had produced more water than oil, water declining with subsequent tests. Top of upper Tonkawa was 3,185 feet, middle Tonkawa 3,335 feet, lower Tonkawa 3,600 feet, Big lime 4,265 feet, Oswego 4,390 feet, Chat 4,856 feet, Chattanooga 5,305 feet.



Mid-Continent Map Co., Tulsa

Two good producers were completed in south end of Lucien pool, Logan County, and another apparently defined southwest trend in section 5-19-2w

H. H. Ellis No. 1 Tiger, NE SE SW section 29-6-8, Hughes County near the Seminole County line, east of Sasakwa, was bottomed at 734 feet, plugged back to 707 feet and produced 2,500,000 feet of gas.

Pontotoc County

Eight wells were completed in the Fitts field, Pontotoc County, the largest producer being Magnolia Petroleum Co. No. 2 Cradduck, SW SE SE section 24-2-6. It topped Hunton lime at 3,783 feet, Sylvan shale 4,076 feet, total depth 4,080 feet, was acidized and made potential of 2,189 bbls. of oil.

E. H. Moore No. 10 Smith B, SE cor. section 25-2-6, found Hunton lime at 3,333 feet, was bottomed at 3,608 feet, acidized, flowed 195 bbls. of oil gross in 3 hours and made potential of 1,810 bbls.

Magnolia Petroleum Co. No. 2 Chambers, NE SW NW section 36-2-6, flowed 341 bbls. of oil gross in 4 hours after acid treatment and made potential of 598 bbls. Top of Hunton lime was 3,823 feet, Sylvan shale 4,062 feet, total depth 4,065 feet.

Shell Petroleum Corp. No. 3 McKinley, SE SW NE section 23-2-7, had Hunton lime at 3,831 feet, total depth 3,955 feet, flowed 940 bbls. of oil in 11 hours and after acidizing made potential of 1,059 bbls.

Magnolia Petroleum Co. No. 18 Burris A, SW SW NW section 27-2-7, topped Cromwell sand at 2,370 feet, total depth 2,510 feet, and flowed 123 bbls. of oil in 12 hours.

Skelly Oil Co. No. 28 Park College, SE SW NE section 28-2-7, flowed 136 bbls. of oil through choke in 10 hours from Cromwell sand topped at 2,363 feet, total depth 2,515 feet.

Skelly Oil Co. No. 27 Park College, NE NW NE section 28-2-7, had Cromwell sand at 2,546 feet, was bottomed at 2,675 feet and flowed 150 bbls. of oil in 18 hours.

E. H. Moore No. 1-A Thompson, NE SE SE section 33-2-7, found top of Gilcrease sand at 1,826 feet, total depth 1,850 feet, and flowed 179 bbls. of oil in 24 hours on gas lift.

New work in Pontotoc County: Carter Oil Co. and Gulf Oil Corp. No. 2 Wells, SW SW NW section 2-1n-7, building rig; Crusaders Petroleum, Inc., No. 1-B Morin, SE cor. section 20-2-7, rig; R. W. Simpson & Crusaders Petroleum, Inc. No. 6-B, Woolley, NW NW SW section 27-2-7, cellar and pits; Crusaders Petroleum No. 1-A Smith, NW SE NE section 31-2-7, cellar and pits; E. H. Moore No. 2 Brown, NW SW SW section 34-2-7, building rig; Patsy Oil Co. No. 1 Meharg & West, C W½ SE SW section 21-2-6, rigging up rotary; E. H. Moore No. 7 Harper, NW NW NE section 29-2-7, an old well, plugged back from 3,785 feet to 2,702 feet, perforated casing and was testing; same operator's No. 13 Schauers, NW cor. section 29-2-7, an old well, testing after plugging back from 3,818 feet to 2,808 feet and perforating; same operator's No. 16 Schauers, NE NE NW section 29-2-7, plugged back from 3,765 feet to 2,812 feet and testing after perforating casing; E. H. Moore No. 2 Frazier, SE NW NW section 23-2-7, an old well being depened, drilling at 3,957 feet.

Skelly Oil Co. No. 3 Park College, SE NE NW section 28-2-7, an old well, was plugged back from 4,305 feet to 4,230 feet, acidized Viola lime, flowed 265 bbls. of oil net in one hour and was recompleted.

Noble County

Continental Oil Co. No. 8 Conway, NW NE NW section 21-23-2w, Billings pool, Noble County, topped Wilcox sand at 4,281 feet, total depth 4,310 feet, flowed 1,140 bbls. of oil through tubing in 6 hours and made potential of 4,550 bbls.

Lincoln Oil Co. and associates No. 2-A O'Neil, NW NW SE section 16-23-2w, found Wilcox sand at 4,267 feet, was bottomed at 4,313 feet and flowed 1,607 bbls. of oil in 8 hours. On potential test it flowed 732 bbls. of oil in 6 hours, making potential of 2,892 bbls., with

2,250,000 feet of gas. It extended Billings production one-fourth mile northward.

Continental Oil Co. No. 1 Conway A, SE NE SW section 16-23-2w, flowed 283 bbls. of oil in 6 hours and made potential of 1,062 bbls. of oil from Wilcox sand topped at 4,253 feet, total depth 4,281 feet.

The following tests in Noble County were reported for the first time: Sinclair Prairie Oil Co. No. 3 Glockler, NE NW SE section 32-20-2w, digging cellar; Phillips Petroleum Co. & Shell Petroleum Corp. No. 6 O'Neil, NE SW SE section 16-23-2w, building rig; same companies No. 5 Hackett, NE NE SE section 21-23-2w, digging cellar and pits.

Logan County

Champlin Refining Co. No. 6 Pfeiffer, NW cor. section 4-19-2w, Logan County sector of the Lucien field, flowed 1,705 bbls. of oil in 12 hours and made potential of 3,206 bbls. of oil, with 13,500,000 feet of gas. It topped second Wilcox sand at 4,870 feet and was bottomed at 5,050 feet.

The same company's No. 7 Pfeiffer, SW NW NW section 4-19-2w, found second Wilcox sand at 4,885 feet, total depth 5,043 feet, flowed 1,641 bbls. of oil in 12 hours and made potential of 3,085 bbls. of oil. Gas gauged 3,090,000 feet.

Eason Oil Co. No. 2 Smith, NW cor. section 13-17-1w, was locating for a new Logan County test. Sinclair Prairie Oil Co. No. 1 Smith, NW SW SE section 12-17-1w, was moving in material.

Oklahoma County

Big Chief Drilling Co. No. 1 Lincoln, SW SW SE section 27-12-3w, Oklahoma City field, Oklahoma County, had Wilcox sand at 6,427 feet, total depth 6,537 feet, and flowed 325 bbls. of oil in 24 hours through tubing, completed.

Clark & Co. No. 1 Baum, NW cor. section 23-12-3w, pumped 300 bbls. of oil in 24 hours after a shot. It had second Wilcox sand at 6,435-92 feet, total depth.

In the Edmond area, Magnolia Petroleum Co. No. 2 School Land, SE NE NE section 36-14-4w, found broken Chicken Farm sand at 6,300 feet, total depth 6,365 feet, perforated casing, was acidized and flowed 92 bbls. of oil in 24 hours.

Southwestern Petroleum Co. No. 1 Jackson, SE SE NE section 35-12-3w, was a rig.

Cleveland County

Carter Oil Co. No. 1 Hall, NW SE SW section 27-10-2w, Moore pool, Cleveland County, topped first Wilcox sand at 7,200 feet, second Wilcox sand 7,320 feet, total depth 7,324 feet. After plugging back to 7,284 feet and perforating casing, it flowed 226 bbls. of oil in 12 hours, completed.

Fain Drilling Co. No. 1 Gross, SW SW NW section 22-10-2w, was moving in material for a new Cleveland County test.

Lincoln County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 3 Crawford, NW NE SE section 35-15-2e, North Wellston area, Lincoln County, made potential of 882 bbls. of oil, with 3,448,000 feet of gas, and was completed at total depth of 5,141 feet. Top of Wilcox sand was 5,109 feet.

C. L. Carlock and others No. 1 Young, C N½ NW NW section 23-15-5, wildcat northeast of Davenport, was a rig. Riley & Talbot and associates No. 1 Weidler, NW SW NW section 20-17-2e, wildcat in the northwestern corner of Lincoln County, was moving in tools.

Seminole County

Malarnee & Shelton No. 1 Huddleston, NE SW NE section 32-7-6, southwest sector of Little River area, Seminole County, had sand at 2,946 feet, total depth 2,995 feet, swabbed and flowed 252 bbls. of oil in 24 hours, was shot and flowed and swabbed 520 bbls. of oil in 24 hours, completed.

Jack Lynch No. 2 Dover, SE SW NE section 24-5-5, Wetley area, an old well, was deepened from 2,714 feet to 2,772 feet, acidized and pumped 18 bbls. of oil in 24 hours, producing from Hunton and Viola limes, and was recompleted.

Deep Rock Oil Corp. and Atlantic Refining Co. No. 4 Coody, SW NE SW section 9-9-7, was a rig. Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 3 Ellis, NW NE NE section 2-10-5, was building rig. Ada Drilling Co. No. 1-A Logan, NE NE SE section 25-8-7, had rig on ground.

Hughes County

Marbett Oil Co. No. 1 Breeding, NW NW NE section 12-7-8, Hughes County, was bottomed at 2,935 feet, plugged back to 1,088 feet and was dry and abandoned.

A. Michelson and others No. 1 Turner-Lucas, NW NW SE section 29-7-8, had a hole full of water at 1,188 feet, total depth, and was abandoned.

Amerada Petroleum Corp. and associates No. 3 Stewart, SW SW NW section 31-9-9, had dug cellar and pits. Same operator's No. 4 Stewart, NW NW SW section 31-9-9, was building rig. Pure Oil Co. No. 1 W. G. Rogers, SE SE NE section 18-8-12, wildcat, was building rig.

Estimated Daily Production

Estimated daily production of Oklahoma for the week ending September 25 and for the preceding week was as follows:

	Barrels	
	Sept. 25	Sept. 18
Allen	5,350	5,425
Billings	8,200	7,625
Burbank	7,950	8,000
South Burbank	13,250	13,330
Balance Osage	20,750	21,100
Blackwell district	5,450	5,500
Bristow-Slick	7,175	7,225
Chandler	2,750	2,775
Crescent	7,875	7,950
Cromwell	3,425	3,525
Cushing-Shamrock	10,900	11,000
Duncan district	3,975	3,950
Edmond	15,500	15,500
Fish	6,025	6,475
Fitts	79,725	86,175
Jesse	3,325	3,375
Graham	4,400	4,450
Gray	1,175	1,175
Healdton	10,150	10,175
Hewitt	4,275	4,325
Holdenville	875	900
Keokuk	8,400	9,825
Konawa	1,500	1,500
Lucien	14,750	14,625
Moore	9,875	9,800
Oklahoma City	147,150	147,250
Olympic	11,650	12,100
Polo	800	825
Sasakwa and townsite	2,550	2,525
Sholem-Alechem	3,050	3,125
Seminole:		
Bowlegs	11,200	11,450
Carr City	5,075	5,125
Earlsboro	6,250	6,100
South Earlsboro	725	1,125
East Earlsboro	7,725	7,650
Little River	12,050	11,600
East Little River	1,050	1,025
Maud	750	750
Mission	1,825	2,050
Seminol	9,475	9,450
East Seminole	2,650	2,700
Searight	4,375	4,300
Total Seminole	63,050	63,325
St. Louis-Pearson	20,050	19,425
Tatums	5,750	5,450
Tonkawa-Garber-Thomas	4,650	4,700
Wewoka	3,025	3,000
Yale-Jennings	4,200	4,225
Other pools	77,500	77,350
Total Oklahoma	600,450	609,175

Coal County

W. A. Delaney had erected rig and was moving in rotary tools at No. 1 Sawyer, SW SE NW section 7-1n-8, an old well in the Coal County sector of the Jesse area, preparatory to reworking it.

Pottawatomie County

Gulf Oil Corp. No. 1 Lulu, SW NW NW section 13-7-4, St. Louis area, Pottawatomie County, topped Calvin sand at 3,138 feet, total depth 3,158 feet, and flowed 496 bbls. of 41.8 gravity oil in 24 hours, completed.

J. F. Smith No. 1 Brandenburg, SW NE SW section 3-7-4, an old well, was deepened from 3,918 feet to 4,273 feet, plugged back to 4,205 feet, was acidized, pumped 29 bbls. of oil in 24 hours and was recompleted.

Atlantic Refining Co. No. 3 Burke, SE SE NE section 16-7-4, an old well, was plugged back from 4,258 feet to 3,599 feet, ripped casing, and was dry and abandoned.

Magnolia Petroleum Co. No. 2 Jones A, NW SE NE section 18-7-4, topped Hunton lime at 3,794 feet, was bottomed at 3,798 feet, acidized, and pumped 120 bbls. of oil net in 24 hours.

Magnolia Petroleum Co. No. 3 Green, NW SW NW section 13-7-4, was location for a new Pottawatomie County test.

Garvin County

Cox-Hamon No. 1 Tussy, NE NE SE section 31-1n-3w, Tussy pool, Garvin County, pumped 150 bbls. of oil in the first 12 hours and was completed after plugging back from 3,500 feet, total depth, to 3,390 feet. Sand was topped at 3,252 feet.

Texas Co. No. 16 Derdeyn, NE SW NE section 17-1n-3w, was completed as a 25-bbl. pumper after a shot. Top of sand was 1,572 feet, total depth 1,752 feet.

Cox-Hamon No. 3 Craig, NW NE NW section 32-1n-3w, and No. 4 Craig, NE NE NW section 32-1n-3w, were were abandoned locations.

New activity in Garvin County: Cox-Hamon No. 3 Tussy, NE SE SE section 31-1n-3w, pits; same operator's No. 1 H. Cole, SW cor. section 32-1n-3w, location; same operators No. 1 Matheny, NW SW SW section 32-1n-3w, location; Skelly Oil Co. No. 4 Gross, SW NW SW section 32-1n-3w, pits; same company's No. 3 Hinkle, SE NW SW section 32-1n-3w, location; Skelly Oil Co. No. 4 Hinkle, SW NW SW section 32-1n-3w, location.

Osage County

Lewis Production Co. completed No. 8 Osage, SW NE NE section 33-24-7, Naval Reserve area, Osage County, at 2,653 feet, total depth. After a shot, it had initial production of 233 bbls. of oil daily. Bartlesville sand was topped at 2,579 feet.

W. G. Ingersoll No. 8 Osage, C E½ E½ SW section 14-24-9, was completed as an 8-bbl. pumper from Bartlesville sand topped at 2,075 feet, total depth 2,09[illegible] feet.

Cecil Juby No. 8 Osage, NE NW NW section 12-27-10, was bottomed at 1,230 feet and pumped 2 bbls. of oil daily.

Indian Teritory Illuminating Oil Co. No. 350-2 Osage, NE SW SW section 27-25-8, an old well deepened, had a hole full of water and was dry and abandoned at 2,418 feet, total depth.

Wolverine Oil Corp. No. 52 North Avant Unit, NE SE SE NE section 31-24-12, was completed as an input well at 1,760 feet, total depth.

New work in Osage County: Link Oil Co. No. 4 well, SE NE NW section 9-22-12, location; Wolverine Oil Corp. No. 71 North Avant Unit, NW SE NW section 30-24-12, location; same company's No. 54 North Avant Unit, NE SW SW NW section 32-24-12, location; Turman Oil Co. and others No. 34 Osage, SW SE NW NW section 13-23-8, location; Indian Territory Illuminating Oil Co. No. 393 Osage, NE SE SE section 29-23-9, an old well, rigging up machine to deepen; Peters Petroleum Co. and Sinclair Prairie Oil Co. No. 19 Osage, NE NW NE section 24-24-7, location; Indian Territory Illuminating Oil Co. No. 450 Osage, SE SW SW SW section 32-26-11, location.

Pawnee County

E. S. Brewer No. 11 Cotton, NE SE SW section 6-20-8, in the North Terlton area, Pawnee County, was drilling at 975 feet.

Payne County

Deep Rock Oil Corp. No. 5 Shannon, C SE SW section 23-18-3, in the Mehan district, Payne County, was drilling at 1,200 feet.

Tulsa County

Johnson Oil Refining Co. No. 2 Hayden, SE SE NW section 31-19-10, an old well in the Keystone area, western Tulsa County, being deepened from 2,287 feet, was drilling at 2,312 feet.

Okmulgee County

Martin and associates No. 6 McHenry, CNL SE NW section 16-14-11, Okmulgee County, topped Dutcher sand at 2,420 feet, was bottomed at 2,431 feet, and flowed 518 bbls. of oil in 24 hours, with 2,000,000 feet of gas.

W. O. Schock No. 3 Field, SE NE NW section 16-14-11, topped Dutcher sand at 2,400 feet, had oil pay at 2,407-10 feet, total depth, and flowed 120 bbls. of oil in 24 hours.

J. F. Moore No. 1-B Howell, SW SW NE section 14-14-13, pumped 6 bbls. of oil and 10 bbls. of water daily from sand topped at 1,065 feet, total depth 1,076 feet.

Adams & Riley No. 3 Cyl, SE NE SE section 28-15-11, found Wilcox sand at 2,843 feet, total depth 2,860 feet, was shot and flowed 150 bbls. of oil in 24 hours.

John Penrod No. 2-A Doyle, C NE SW section 15-13-14, had sand at 1,624 feet, total depth 1,652 feet, was shot and pumped 10 bbls. of oil in 24 hours.

C. D. Burns & E. R. Black No. 1-A Hawkins, SW SW NE section 16-14-11, topped Wilcox sand at 2,946 feet, total depth 2,954 feet, plugged back to 2,940 feet and was dry and abandoned.

New work in Okmulgee County: H. C. Detrick and others No. 1-A Smith, C S½ SW SE section 9-15-14, spudded; Royal Oil & Gas Co. No. 7 Johnson, C N½ NE NE section 29-15-14, location; Bruce Martin and others No. 7 McHenry, NE SE NW section 16-14-11, location; Acme Supply Co. and H. C. Detrick No. 1-A Chapman, NE SW SW section 20-14-11, moving in machine; E. H. Moore No. 2-A Ranch, SE SE SW section 11-14-13, rigging up machine, J. F. Moore No. 2-A Howell, NW NW NE section 14-14-13, machine.

Creek County

Texas Co. No. 6 McIntosh, NE NW NE SW section 3-17-7, an old Creek County well, was deepened from 2,580 feet to 2,647 feet, total depth, finding Bartlesville sand at 2,535-2,644 feet. It pumped 35 bbls. of oil daily, recompleted.

(Continued on Page 90)

California Field Report

By
L. P. STOCKMAN

WILMINGTON DEVELOPMENT DELAYED BY COMMISSIONERS

LOS ANGELES, Calif., Sept. 27.—The Long Beach Harbor Commisioners have not reached a decision regarding development in the eastern end of the Wilmington field of Los Angeles Basin. As a result operators are unable to proceed with normal development. Due to the uncompromising position assumed by members of the Harbor Commission and the abnormal restrictions imposed on operators, another 30 days may expire before drilling operations get under way. Operators in the Wilmington field are expected to formulate a curtailment program in the near future as Standard Oil Co. has announced its intention of laying a pipe line into the field and purchasing oil, and will, in keeping with its usual practice, require some degree of curtailment. General Petroleum Corp. is the only large company to have pipe line facilities in the Wilmington field, but now that Standard has announced its intention of laying a line other large buyers may also come into the market. Up to the present this field has been without a regularly posted price but upon completion of the new line Standard will post a schedule of prices starting at 75 cents per barrel as a minimum. The Wilmington field has a present potential daily production of 122,000 bbls. but this is expected to exceed 175,000 bbls. if the Long Beach Harbor Commissioners lift drilling restrictions in the immediate future. This field presents an interesting condition in as much as only a limited amount of crude oil has been removed to date and for this reason the decline has been very small and the potential continues to increase. With adequate pipe line facilities and wells permitted to produce steadily instead of intermittently the decline will take place. Due to the large thickness of oil sand the decline will undoubtedly be quite slow. The town lot area should show the first effects of steady production because of the large number of wells drilled in a restricted area whereas the eastern and central areas where wells have been drilled on an acreage basis should hold up for a long time.

Completions in the Wilmington field during the past week were small in number and did not show large initials. No. 23 Ford of General Petroleum Corp. showed an initial daily production of only 121 bbls. of 19.4 gravity oil from 2,950 feet. It was completed in the upper zone which is not as prolific as the deeper horizons. No. 23 Ford was finished with a 8⅝-inch liner including 350 feet of 50 mesh, and was brought in flowing through a 32/64-inch bean under a pressure of 120 pounds on the tubing and 630 pounds on the casing. Exeter Oil Co. completed its first producing well in the Wilmington field a few days ago when No. 1 Banning was brought in flowing 293 bbls. of relatively clean 16.5 gravity oil per day from 3,609 feet. The hole was finished with a 7-inch combination string cemented through perforations at 2,933 feet and carrying perforations opposite the productive formation at 2,937-3,378 feet and at 3,388-3,608 feet.

Union Pacific Railroad Co., largest holder of acreage in the field completed No. 58, flowing 360 bbls. of clean 18.3 gravity oil daily from 3,080 feet. All of this company's acreage in the Wilmington field is owned in fee. No. 58 was finished with 701 feet of 8⅝-inch liner carrying perforations at 2,395-2,581 feet, 2,605-2,635 feet, 2,675-2,935 feet, 2,959-3,029 feet and at 3,054-3,070 feet. Union Pacific Railroad Co. No. 20, completed a week or so ago flowing 7,717 bbls. of clean 25.9 gravity oil daily, has been pinched back to 2,490 bbls. and will probably be cut back still farther. Gravity of the oil has improved as it now averages 27.1 degrees with a negligible cut.

Royalty Service Corp. which has pursued an aggressive development program in the Wilmington field completed No. 4-A Santa Fe flowing 220 bbls. of fairly clean 16.6 gravity oil per day from 3,601 feet. It is flowing through a 32/64-inch bean and shows a tubing pressure of 150 pounds and a casing pressure of 310 pounds. On the Banning property McDonald & Burns completed No. 1 flowing 440 bbls. of clean 17.3 gravity oil per day from 3,620 feet. This new producer was finished with 714 feet of 6⅝-inch liner carrying perforations at 2,955-3,020 feet, 3,060-3,180 feet and at 3,260-3,619 feet. Production is coming through a 5/16-inch bean and shows a tubing pressure of 140 pounds and a casing pressure of 400 pounds. Pacific Western Oil Co. has completed No. 1 Weldt Community flowing 330 bbls. of relatively clean 14.3 gravity oil daily from the upper zone at 2,925 feet after finishing the hole with 566 feet of 8⅝-inch liner including 329 feet of perforated.

Ten Section

In the Ten Section field Shell Oil Co. completed No. 4-A Kern County Land in section 30-20-26, flowing 3,267 bbls. of clean 35.7 gravity oil and 2,400,000 feet of natural gas per day from 8,236 feet. This is the seventh productive well completed in the field by Shell Oil Co. In section 31-30-26 Shell is rotating ahead at 7,550 feet in No. 61-B Kern County Land and has spudded in No. 8-A in section 28-20-26.

In the Greeley field of Kern County where Standard Oil Co. has developed a potential daily production of 12,827 bbls. new wells are being started by Standard in section 20-29-26 and section 17-29-26. No. 11-7 Kern County Land, a recent completion in section 20-29-26, has established a potential daily production of 3,489 bbls. of clean 48.9 gravity oil and 67,000,000 feet of natural gas. It has been shut in and at present shows 1,600 pounds on the tubing and 2,300 pounds on the casing.

Ventura Avenue

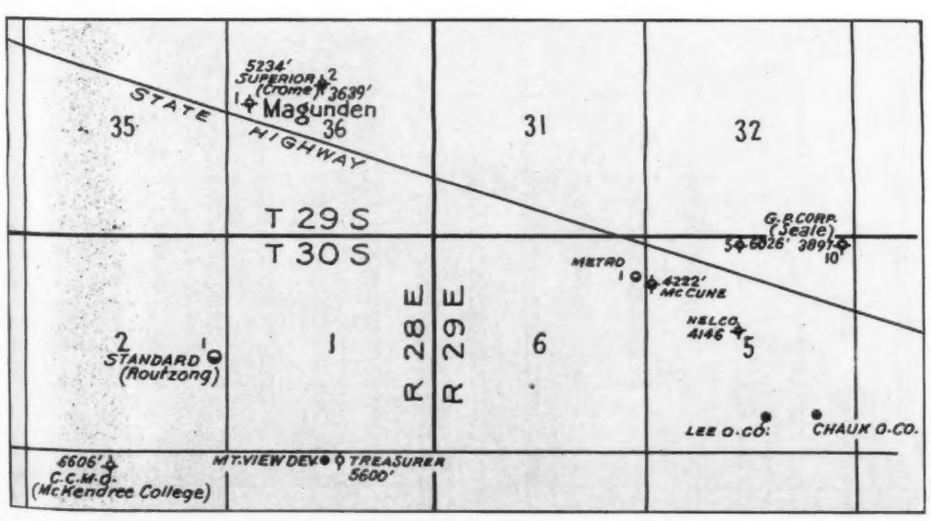
In the Ventura Avenue field Shell Oil Co. has recompleted No. 35 Gosnell flowing 1,620 bbls. of clean 31.8 gravity oil and 1,015,000 feet of natural gas per day after redrilling and deepening the hole from 8,767 feet to 9,366 feet. This rejuvenated producer was completed in the prolific 57 zone discovered a few years ago by Tide Water Associated Oil Co. and a check of drilling operations under way in this field indicates that Tide Water Associated should complete No. 137 Lloyd in this same zone within ten days. This well is rotating ahead at 9,912 feet in an excellent looking oil sand and shows promise of resulting in large production. No. 62 Lloyd and No. 125 Lloyd are both being prepared for production in the upper zone and should be tanking oil within the next few days. General Petroleum Corp. has almost reached the bottom of the hole in No. 17 Barnard which is being redrilled at 7,999 feet with bottom at 8,173 feet. This well was originally scheduled for completion in the 57 zone and may yet be carried down to that horizon if the hole is in good shape when bottom is reached.

Long Beach

Hilldon Oil Co. completed No. 2 Bixby in the newly discovered productive area west of the northwest tip of the old Long Beach field and Union Oil Co. should be ready to begin actual drilling operations on No. 1 Oil Operators within another week. The latter well located on property leased from the Oil Operators Waste Water Disposal system has required considerable piling in order to support the rig and drilling equipment. This property at one time consisted of a deep ravine but it has become filled up with muck and sand from the waste water disposal system. For this reason the contractor building the foundation for the Union's new rig was obliged to drive a number of 60- and 80-foot piles. Hilldon Oil Co's. new producer was brought in flowing 675 bbls. of clean 24.3 gravity oil and 500,000 feet of natural gas per day from 4,135 feet. The hole was finished with 75 feet of 6⅝-inch liner including 52 feet of perforated. Hilldon which discovered this new productive area is driving piles for No. 3 Flood Control in section 13-4-13 and should have this rig completed within another week. Wells in this area due to the relatively shallow depth at which production is secured are drilled from spud to completion in not more than five weeks. Hilldon's first large well was drilled and completed in exactly thirty days. Marvell Oil Co. completed a rig for No. 1 Christenson south of the Hilldon Oil Co's. property. In the Long Beach field, the Texas Co. recompleted No. 1 Goddard pumping 196 bbls. of 25.6 gravity oil per day from 4,310 feet after the hole had been carried deeper and then plugged back to the completion depth.

Mount Poso

Union Oil Co. completed No. 12 Tribe in the Baker area in the west end of the Mount Poso field pumping 540 bbls. of 16.3 gravity oil per day from 1,855 feet. This well, in section 28-27-28, is in an area where the average daily production of new wells runs around 250 bbls. The Mount Poso field has taken a renewed lease on life and as a consequence a number



Standard Oil Co. is drilling a wildcat southwest of Magunden in section 2-30-28 about 3 miles north of the Mountain View field in Kern County

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	September 16		September 9			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Crude oil	.....	.....	.....	.....	68,038	.....
Diesel and gas oil	.....	.....	.....	.....	176,726	151,541
Gasoline	115,945	16,564	.....	.....	2,942,226	4,897,525
Kerosene	.....	.....	.....	.....	328,907	888,702
Foreign exports:						
Crude oil	129,211	18,459	216,805	30,972	10,066,970	7,005,122
Fuel oil	61,987	8,855	101,670	14,524	9,890,332	7,260,344
Diesel and gas oil	120,412	17,202	98,719	14,103	5,767,323	4,208,019
Gasoline	.....	.....	282,750	40,393	6,062,418	5,154,243
Kerosene	.....	.....	.....	.....	1,589,462	1,088,281
Other unfinished oil	.....	.....	.....	.....	849,163	132,908
Coastwise-domestic:						
Crude oil	183,798	26,257	243,933	34,848	3,587,056	4,731,712
Fuel oil	478,058	68,294	221,482	31,640	11,178,470	7,084,926
Diesel and gas oil	24,101	3,443	14,205	2,029	1,700,681	867,958
Gasoline	255,345	36,478	322,339	46,048	11,131,202	9,129,349
Kerosene	36,218	5,174	.....	.....	308,619	138,814

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	152,932	.....
Gasoline	.....	.....	.....	.....	25,778	227,419
Asphalt	73,368	10,481	.....	.....	351,394	267,431
Lubricants	3,050	436	.....	.....	25,522	38,131
Foreign exports:						
Crude oil	.....	.....	.....	.....	1,957,468	2,325,466
Fuel oil	36,582	5,226	22,697	3,242	1,613,624	1,990,942
Diesel and gas oil	131,271	18,753	.....	.....	2,370,799	1,382,311
Gasoline	112,945	16,135	.....	.....	3,745,253	2,760,3-
Kerosene	17,187	2,455	.....	.....	700,263	546,419
Lubricants	.....	.....	.....	.....	425,740	268,440
Other unfinished oil	.....	.....	.....	.....	.....	90,923
Coastwise-domestic:						
Fuel oil	107,268	15,324	192,684	27,526	4,706,774	4,745,740
Diesel and gas oil	34,629	4,947	68,684	9,812	880,772	515,382
Gasoline	135,772	19,396	189,024	27,003	3,741,876	3,632,404
Kerosene	.....	.....	.....	.....	.....	141,580

of new wells have already been started and additional locations staked. A large part of this new work is located in the productive area discovered about a mile north of the southern tip of the field by Ring Oil Co. several months ago. This area judging by the amount of work started will be aggressively developed. Vedder Petroleum Corp. which completed No. 1 Lambert last week pumping 225 bbls. per day has staked location for several additional wells. In section 32-26-28 the company is building rig for No. 1 Hyde and is rigging up No. 29-3 and No. 29-4 on the Lambert property in section 29-26-28. No. 29-2 Lambert should be tanking oil within the next few days. Ring Oil Co. discoverer of this productive area is completing No. 2 Blackfoot in section 32-26-28 and is rigging up No. 29-4 Bowles in section 29-26-28 preparatory to an early spud. Two additional wells are scheduled for completion this week and both should result in normal production. These potential producers are D. G. Vedder's No. 1 B. N. B. in section 32-26-28 and Desert Glow Oil Co. No. 2 in section 14-27-27. Top of the Vedder was logged in the former at 1,634 feet and in the latter at 1,190 feet.

Midway-Sunset

In the Midway-Sunset field of the San Joaquin Basin two new wells were completed but both were showing rather high water cuts at last reports. They may clean up after they have been on production a few days longer. In section 21-32-23 Chansior Canfield Midway Oil Co. completed No. 25 pumping 137 bbls. of 15.3 gravity oil per day from 2,722 feet but the output showed a cut of 36 per cent and may necessitate some remedial work. No. 43 in the same section also tested wet upon completion at 2,716 feet and preparations are under way to effect a water shut off at 2,342-2,500 feet at which point water is entering the hole. The Texas Co. completed No. 24 in section 32-32-24, pumping 206 bbls. of 22.6 gravity oil cutting 24 per cent daily from 3,155 feet. The Texas Co. spudded No. 25 and has a rig standing for No. 26.

Fruitvale

In the Fruitvale field, Western Gulf Oil Co. has completed No. 27-B Kern County Land in section 21-29-27 flowing 140 bbls. of relatively clean 23.1 gravity oil daily from 3,898 feet. This new well was finished with 68 feet of 6⅝-inch liner including 40 feet of 120 mesh landed at 3,896 feet and is flowing through a 36/64-inch bean under a tubing pressure of 110 pounds and a casing pressure of 460 pounds. Immediately upon completion of this new producer the company began erecting a new rig for No. 28-B Kern County Land in the same area. Next week Western Gulf expects to complete No. 8 Red Ribbon in section 27-29-27 as it is at present standing cemented on top of the pay at 3,386 feet with bottom of the hole at 3,456 feet. Drilling operations are slowing down in this field although Meridian Oil Co. recently completed new rigs for No. 4 fee and No. 6 Turner.

Mountain View

In the Mountain View field of Kern County P. H. Greer completed his second producing well on the Perrel property in section 9-31-29 flowing 510 bbls. of very clean 27.7 gravity oil per day from 5,502 feet. This new well was No. 1 Perrel brought in flowing through a 38/64-inch bean under a tubing pressure of 180 pounds and a casing pressure of 800 pounds. Most of the activity in this field is on the eastern end of the structure where Hogan Petroleum Co. and Mohawk Petroleum Co. recently completed excellent wells. General Petroleum Corp. concluded drilling operations on No. 2 Freeport in section 19-30-29 at 4,760 feet and will produce from the Chanac zone. Hogan Petroleum Co. is completing two potential producers and should have another tanking oil within a short time. The new wells scheduled for immediate completion are No. 3 Peters in section 5-31-29 and No. 4 Symons-Bankline in section 4-31-29 and the well which will follow this group into production is No. 9 Wharton in section 32-30-29. Mohawk Petroleum Co. which recently finished No. 5 Earl Fruit as an excellent well has gone back into No. 4 Earl Fruit in section 4-31-29 and will attempt to whipstock the hole across the fault.

Lost Hills-Belridge

The Texas Co. No. 1 Martin, in the extreme northwestern end of the North Belridge field has taken on a greatly improved outlook and this outpost located about 2,000 feet removed from production shows exceptional promise at 8,096 feet. A formation test made early in the week indicated a potentiality of 8,000,000 feet of gas and 17 stands of drill pipe were filled with mud and oil. The well looks so good that Tide Water Associated Oil Co. has staked location for an offset which will be drilled if No. 1 Martin is completed as a large producer. The Texas Co. started work on No. 1 Martin several years ago and then suspended operations because it then appeared to be located out too far on the structure. Several months ago the company resumed work and proceeded to drill ahead with the results noted above. Tide Water Associated Oil Co. has a new rig up for No. 7 Result which is scheduled for early spud and Belridge Oil Co. is putting the finishing touches on No. 61, section 26-27-20, at 8,040 feet, but will drill ahead before making a production test in the Wagonheel zone. In the Lost Hills field Argo Petroleum Corp. has completed No. 1 Farnsworth in section 11-26-20 pumping 118 bbls. of 14.3 gravity oil daily from 1,294 feet. This well is in the extreme western end of the Lost Hills structure where Tide Water Associated Oil Co. proved up the existence of small heavy oil at shallow depths. None of the operators who have drilled in this area has been able to solve the water problem and produce clean oil. Wells, as a rule, come in pumping in excess of 100 bbls. per day but soon decline and show a high water cut coincident with the decline in production.

Kettleman Hills

Temblor Oil Co. No. 1 Bunting in the Kettleman Middle Dome field has taken on a rather favorable outlook at 8,256 feet as a formation test showed considerable gas. Top of the Temblor was logged at 8,093 feet and the present formation is a silty gray sand and shale showing oil and gas. The importance of this showing can not be discounted and as a consequence operators are watching work with considerable interest. In the Kettleman North Dome, Kenda's deep test has

(Continued on Page 86)

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.70	$.70	$.70	....	....	$.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.76	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$.70	.74	.74	.71	$.76	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.82	.77	.80	....	.70	.78	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.77	.82	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	....	.87	.86
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	1.02	....	....	....	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	.99	1.15	1.10	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1 36	....	1.42	....	....	....	....	....	1 39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1 40	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over

West and North Texas

By
L. E. BREDBERG

THROCKMORTON DISCOVERY; PERMIAN LIME EXTENSIONS

FORT WORTH, Tex., Sept. 27.—More wildcat locations, pool extensions and some disappointments were mixed to make up the important news from the West Texas district during the week, with lack of porosity in the lime appearing as the probable cause for wells in the northern tier of counties, not making as large producers as anticipated.

The Stanolind Oil & Gas Co. has at last completed its No. 1 Slaughter, in Labour 76, League 37, Zavalla County School Lands, for an initial production of 432 bbls. in 24 hours through three-quarters inch choke on tubing, at a total depth of 4,975 feet. It was shot with 180 quarts of nitroglycerin after having been treated with 6,000 gallons of acid before shooting. Gravity of the oil tested 31 degrees. This well is 2½ miles southeast of the Texas Co.'s discovery of Hockley County's only oil field, consequently makes a considerable extension and proves up a couple of intervening sections of land. It is also the first well drilled in the field since it was discovered.

Eight miles southeast of the above well, Frank Bates and the Phillips Petroleum Co. No. 1 F. S. Lockett, in section 5, Block 1, P.S.L. Survey, on the southern line of Hockley County, is nearing critical depth, as it is now drilling near the 5,000-foot level after exhausting a little salt water logged at 4,819-25 feet. It will be closely watched during the week.

Upton Abandonment

Another abandonment for the eastern part of Upton County is that of Maverick Oil Co. on the Holmsley ranch, in section 16, Block B, C.C.S.D.&R.G.N.G. Survey, about 3½ miles southeast of a dry hole, drilled some time ago by Moore Brothers, and about 8 miles southeast of the Humble Oil & Refining Co.'s deep test which was abandoned at 11,700 feet.

Disappointments in Terry County

Terry County, adjoining Hockley on the south, appears to have registered two deep disappointments, one of which is being abandoned and the other shut down. Anthony & Rice No. 1 Brownfield, section 28, Block A-1, E.L.R.R. Survey, is shut down at 5,340 feet and R. L. Foree No. 1 Poole, in section 54, Block D-11, D.&S.E. Survey, is being abandoned at 5,507 feet after striking sulfur water between 5,492 and 5,507 feet. The latter test is in the northwestern part of the county and the former in the east central part.

Water Worries

The southeastern side of the Harper field in Ector County may have been defined by Fuhrman Petroleum Corp. and Colton Brothers No. 1 Cowden, in section 41, Block 43, Township 2s, T.&P. Survey, about 2 miles southeast of the Harper field. It struck three-quarters of a bailer of sulfur water per hour at 4,305-12 feet. At the same time, Mabee and Blackstock No. 1 Cowden, in section 23, Block 44, Township 2s, T.&P. Survey, swabbed 185 bbls. of oil in 16 hours following a 6,000-gallon acid treatment at a total depth of 4,325 feet. It appears as another half-mile northern extension well to the Harper field, but unless further treating or shooting makes a better well, it may prove that it is near the northern edge of the field.

Small Discovery

E. L. Wilson and others No. 1 T. H. Scanlon, section 83, Block M, E.L.R.R. Survey, northwestern Dawson County, is the county's second small pumper discovery well. It is making around 40 bbls. of oil per day, production having decreased since it was first tested on the beam after acidizing with 5,000 gallons. It was drilled to a total depth of 4,965 feet, but showed water and was plugged back to 4,933 feet. All of the water was not plugged off, for it is still making around 8 bbls. per day.

New Locations

In the newly opened field in southwestern Yoakum County, the Denver Producing & Refining Co., which opened a new field for the county with its No. 1 Whittenburg, in section 831, Block D, has made a location for a test about 1 mile to the east of No. 1 Whittenburg. The location is in the NW cor. section 830, same block.

The Texas Co. made a location for No. 2 Slaughter, three-quarters of a mile northwest of its southwestern Hockley County discovery in Labour 77, League 38, Zavalla County School lands. The new location is in the same labour and league.

A wildcat in the south central part of Pecos County is to be drilled by the Wilcox Oil & Gas Co. on the Serf lands, in section 27, Block 130, T.&St.L. Survey.

A wildcat in Crockett County is Stewart and Cormas No. 1 Hoover Ranch, in section 1, Block FF, B.&B. Survey. It is now drilling.

The area near Sylvester is to receive its second test immediately as I. J. Allen is moving in rotary rig and equipment onto the H. S. Newman Ranch, in Lot 49, Bastrop County School lands, which is in the southeastern part of Fisher County, south and on the trend with the Royston field. It is near the south end of a block of some 5,000 acres, which was previously shot with seismograph instruments, and is about 2½ miles south of the Bond Oil Corporation's test on the Bertram Estate.

Another wildcat location is to be made by Finley, Fields and Cherry on the Mrs. M. S. Pierson farm, or on the Anderson Lands south of Aspermont in Stonewall County. The operators have a block of some 6,500 acres about 8 miles northwest of the General Crude Oil Co. No. 1 Bryan, which failed to make a producer when good showings in saturated sections were tested.

In the southern part of Jones County, John Reeves of Fort Worth staked location for a test just over the line in Taylor County, on the L. H. Lee lands in section 16, Block 16, T.&P. Survey, 4 miles west of the Condor-Sayles field. Reeves also made a location on the McGee and James Lands, in section 22, Block 16, T.&P. Survey, 1½ miles southeast of the first named test, but in Taylor County.

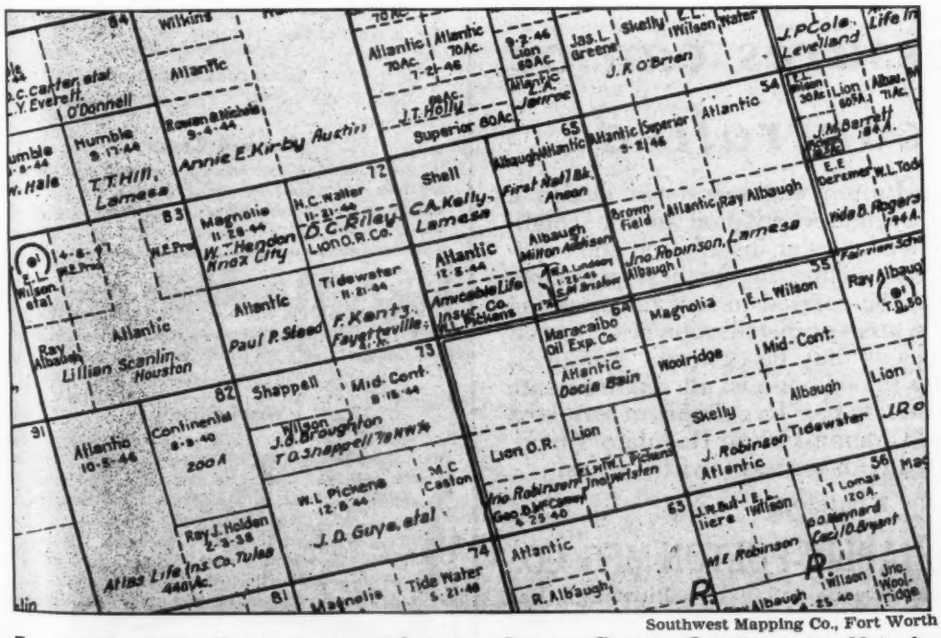
Upton Extension

The Sherk area, northeast of the McCamey field in Upton County, was given another half-mile extension when Falcon Oil Co. No. 1 E. H. Sherk pumped 1,150 bbls. per day, no water, after acidizing the lime with 2,000 gallons. It topped the pay at 2,635 feet and is bottomed at 2,670 feet. Between this new extension well and the field proper, are two old dry holes drilled several years ago before the advant of acid treatment of lime wells in the field, consequently those two dry holes, prove nothing, except that where and when acid is used on lime tests, wells may be produced that would otherwise be abandoned.

The comeback of the old McCamey field has been nothing short of phenomenal, as it was in the depletion stage and was considered absolutely defined on all sides, and no drilling was being done at the time acid treatment of lime was inaugurated. Many old wells had already been abandoned before acid was first used which proved highly successful. Since that time, many more wells have been drilled, old producers have been treated, and many extensions have been made, on nearly all sides of the field, proving up several hundred more acres to production.

Connecting Wells

Two wells of E. E. Fogelson in the southwestern part of Ector County, appear to be linking the Penn pool in that county with the Jordan and University pools in the northwestern part of Crane County. His No. 1-B University, in section 7, Block 35, University Survey, is 1 mile south of the same operator's 1-A University, which recently extended the Penn pool about 1½ miles south. No. 1-B is extending it another mile south, and is flowing 75 bbls. per day, by heads, while drilling below 3,530 feet in lime. It logged the first pay at 3,350-82 feet. Farther to the south his No. 1-D University, in section 14, is also


Atlantic
Humble
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Shell
Lion O.R.
Atlantic
Tidewater
Shappell
Mid-Cont.
Continental
Ray J. Holden
Atlas Life Ins. Co. Tulsa
Magnolia
Tide Water
R. Albaugh
Lion
Albaugh
Skelly
Woodridge
Mid-Cont.
Tidewater
Atlantic
Magnolia
E. L. Wilson
Ray Albaugh
Lillian Scanlin Houston
Paul P. Steed
J. D. Guye, etal
Annie E. Kirby Austin
T. T. Hill, Lamesa
C. A. Kelly, Lamesa
O. C. Riley
Lion O. R. Co.
First Nat'l Bk. Anson
F. Kantz, Fayetteville
Maracaibo Oil Exp. Co.
Docia Bain
J. Robinson
Tide Water
R. Albaugh
Jno. Robinson, Lamesa
Albaugh Milton Addison
Amicable Life Insur. Co.
Pickens
Brownfield
Ray Albaugh
Jno. Woolridge
Albaugh
Skelly
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Wilson
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Atlantic
Superior
Lion
Albaugh
Atlantic
Ray Albaugh
Jno. Robinson, Lamesa
Albaugh
Milton Addison

flowing 75 bbls. per day, by heads, following a 330 quart shot from 3,508-88 feet.

The Jordan pool, mentioned above, in northwestern Crane County, received its largest well when the Texas Co. No. 1-D University, located in section 13, Block 35, University Lands, flowed 739 bbls. in 4 hours, with drill stem in the hole. It topped the pay at 3,507 feet and was shut down at 3,527 feet to test. This well is in the southeastern part of the Jordan pool and 1½ miles southeast of the Clark, Cooper and Smith discovery well on the Jordan lands. It is also 1 mile west of a dry hole of the Sinclair Prairie Oil Co., but has three offset producers already.

Richard and Greer, who hold a block of 4,000 acres 4 miles southwest of Post in Garza County, are preparing to sink a 3,250-foot wildcat. Location is on the J. B. Slaughter lands, in section 5, Block 8, T.&P. Survey, 2 miles southwest of the nearest production in the Post pool.

The Goldsmith field, most promising new major field in West Texas, has had its daily allowable cut to 10,000 bbls. per day, a reduction of 1,936 bbls. from the September allowable. Operators in the pool demanded the cut after purchasers stated their requirements.

NORTH TEXAS

The Denver Producing & Refining Co., which has brought in the only two producing areas in Grayson County, one just east of Collinsville and the other discovery 2½ miles northwest of Whitesboro, is planning to drill a second test near the latter discovery. About three months ago the Whitesboro discovery pumped 37 bbls. of 37-gravity oil and around 100 bbls. of water per day from sand logged at 2,388-97 feet, but the company later decided to carry the test to its contract depth, 4,000 feet, seeking the pay found in the Big Indian Development Co. No. 1 B. W. Davis producer about 3 miles to the west. While drilling for that pay the drill pipe became stuck at 3,594 feet, where the crews are trying to loosen it in order to carry the hole on down to contract depth. As soon as that test is completed or plugged back to the upper sand and again put on production, the rig will be skidded to drill a second test on their block of some 8,000 acres in the area.

Forest and P. S. Kendrick of Abilene are preparing to drill a Canyon lime wildcat test, to spud within 30 days, on a 6,620-acre block lying partly in Shackelford and Haskell counties, a number of miles northeast of the Avoca field in northeastern Jones County, in which production is coming from the Canyon. The new wildcat will be located on the T. D. Hendrick land in section 1, A.B.&M. Survey, Abstract 836.

New Deep Pool

A new deep (Marble Falls lime) field has been opened in Throckmorton County, northwest of the town of Westover, in an area in which there has been a number of shallower producers drilled. The Red Bank Oil Co. opened this new area by its No. 1 W. O. Parrott, in section 961, T.E.&L. Survey. It topped the Marble Falls at 4,416 feet and shut down only 1 foot in the pay to run tubing and test. It later began flowing, but no estimate was made as to its potential. Gravity of the oil tested 38 degrees. The well is in the northeastern part of a 1,000-acre block held by the company.

Bolivar Outpost

The small, shallow pool 2 miles west of the town of Bolivar in western Denton County, opened last summer by A. A. Landers, has been extended 2,000 feet to the southwest by the completion of the Trintex Oil Co. (R. C. Hart) No. 1 Forrester, in the J. B. Barrough Survey, on the same lands and in the same survey as the discovery well. This small extension well pumped 6 bbls. on a 12-hour test from total depth of 1,731 feet. Several other tests have been drilled around the discovery, either proving dry or only gas producers, the pool proving but pimple in size, so far.

CENTRAL TEXAS COMPLETIONS

Brown County

Garland Moore and others No. 1 Williams, 580 feet, temporarily abandoned.

Callahan County

W. J. Murray No. 3 Ross, 1,250 feet, dry and abandoned.

Coleman County

Roy H. Denhart No. 1 James, 1,068 feet, dry and abandoned.

Eastland County

Dorothy Oil Co. No. 1 Taylor & Beard, 1,400 feet, dry and abandoned.

Jack County

Algord Oil Co. No. 4 Jones, 3,196-3,229 feet, 265 bbls. Burk Royalty Co. No. 1 Jones, 2,954-65 feet., 3,052-64 feet, 3,082-3,100 feet, total depth 3,123 feet, 424 bbls. Cockburn Oil Co. No. 2 Box, 3,063-3,115 feet, 316 bbls.; No. 4 Clayton, 3,025-28, 3,094-3,115, total depth 3,153 feet, 382 bbls. Hammon & Hanlon-Buchanan, Inc. No. 1 Hodges, 2,956-68 feet, total depth 3,026 feet, 50 bbls. Hammon & Herbert Oil Co. No. 11 Rhodes, 3,005-28 feet, 516 bbls. Hanlon-Buchanan, Inc. No. 5 Sampley, 3,000-20 feet, 802 bbls. Hill & Hill No. 8 Clayton B, 2,977-3,005 feet and 3,050-85 feet, total depth 3,118 feet, 469 bbls. Josaline Production Co. No. 2 Beasley, 2,932-50 feet, 86 bbls. Mar-Tex Oil Co. No. 9 Clayton, 2,999-3,002 feet and 3,009-15 feet, total depth 3,025 feet, 80 bbls.; No. 8 Jones, 3,000-18 feet, 3,040-55 feet, 3,083-3,108 feet, 165 bbls. Ohio Fuel Supply Co. No. 1 D. J. Miller, 2,987-3,019 feet, 341 bbls. Taubert & McKee No. 1 Box, 3,080-3,110 feet, total depth 3,132 feet, 60 bbls. Two Well Oil Corp. No. 2 Jones, 3,041-53 feet, 3,148-52 feet, 3,183-89 feet, 579 bbls.

Jones County

Brown Eagle Oil Co. and others No. 1 Glaze, 2,505 feet, dry and abandoned. E. P. Campbell and others No. 1 Minter, 2,524 feet, dry and abandoned. Joe Deu-Pree & Son No. 3 Jackson, 1,984-92 feet, total depth 2,001 feet, treated 2,000 gallons acid, 392 bbls. Fain & McGaha Oil Corp. No. 1 Akens, 2,140 feet, dry and abandoned; No. 1 Wheeler, 2,467 feet, dry and abandoned. Iron Mountain and Humble No. 1 Haterius, 3,241-46 feet, 1,159 bbls. in eight hours. Maracaibo Oil Exploration Corp. No. 2 Olander, 1,607 feet, dry and abandoned. W. J. Murray, Jr. No. 1 Jackson, 1,979-98 feet, 18 bbls. in seven hours. Petroleum Producers Co. No. 5 Harvey, 1,631-42 feet, 20 bbls. Ungren & Frazier and others No. 1 Kelley, 2,002-17 feet, treated 2,000 gallons, 146 bbls.

Shackelford County

W. E. Butler No. 16 Morris, 1,590-1,613 feet, 50 bbls. Knight & Ewing No. 11 Jeter, 1,191-1,220 feet, 10 bbls. Homer Slicker No. 9 Mathews, 836-466 feet, 8 bbls. Tannehill and others No. 36 Mathews, total depth 1,148 feet, dry and abandoned.

Stephens County

W. J. Rhodes No. 1 Black Brothers, 3,340-42 feet, 16 bbls.

WEST TEXAS COMPLETIONS

Crane County

Humble Oil & Refining Co. No. 13 Tubbs, 4,370-4,435 feet, acidized, 2,668 bbls.

Ector County

Cities Service Oil Co. No. 4-A Blakeney, 4,124-4,244 feet, shot, 390 bbls.; No. 4-B Cummins, 4,173-4,250 feet, shot and acidized, 287 bbls. W. H. Dunning, Jr., No. 4 Scharbauer, 4,143-4,225 feet, acidized, 1,566 bbls. Humble Oil & Refining Co. No. 6 Cowden, 4,142-4,227 feet, acidized, 903 bbls.; No. 2-C Scharbauer, 4,119-4,200 feet, acidized, 970 bbls. Landreth Oil Corp. No. 2-A Cummins, 4,162-4,200 feet, acidized, 2,031 bbls. Mid-Continent Petroleum Corp. No. 4 Blakeney, 4,110-4,232 feet, shot, 553 bbls. Phillips Petroleum Corp. No. 2 Kloh, 4,081-4,205 feet, shot and acidized, 237 bbls. Rogers & Rogers No. 1-A T. P. Land Trust, 4,210-4,302 feet, acidized and shot, 278 bbls. Stanolind Oil & Gas Co. No. 6 Roberts, 4,110-4,329 feet, shot, 1,289 bbls. Texas Pacific Coal & Oil Co. No. 7 Scharbauer, 4,172-4,242 feet, shot and acidized, 1,920 bbls. Tide Water Associated and others No. 2-C Holt, 4,150-4,317 feet, shot, 1,050 bbls.

Fisher County

Dean Brothers No. 5 Herring, 3,133-52 feet, plugged back to 3,142 feet, acidized, 55 bbls. on pump. Magnolia Petroleum Co. No. 1 E. Smith, 3,488-3,520 feet, acidized, 862 bbls. Tide Water Associated Oil Co. No. 2 Smith, 3,534-43 feet, 1,470 bbls.

Glasscock County

Eastland Oil Co. No. 5 Clay, 1,833-68 feet, shot, 16 bbls. on pump.

Howard County

Continental Oil Co. No. 4-A Overton, 2,435-76 feet, acidized, 1,007 bbls. on pump. Illinois Oil Co. No. 5 Lane, 2,450-2,816 feet, shot, 961 bbls. on pump. Superior Oil Co. No. 22-E Roberts, 3,012-21 feet, plugged back to 3,017 feet, 1,487 bbls. on pump.

Pecos County

Cardinal Oil Co. No. 49-E Tippett, 469-544 feet, 16 bbls. on pump. Paul Childress Trustee No. 20 Smith, 363-390 feet, 5 bbls. on pump. Magnolia Petroleum Co. No. 1 McKee, junked and abandoned 1,210 feet.

Ward County

Gulf Oil Corp. No. 45 Estes, 2,508-2,650 feet, shot, 706 bbls.; No. 47 Estes, 2,518-2,940 feet, shot, 574 bbls.; No. 76 Hutchins, 2,590-3,100 feet, shot, 149 bbls.; No. 84 Hutchins, 2,507-2,740 feet, shot, 1,203 bbls.; No. 85 Hutchins, 2,532-2,750 feet, shot, 928 bbls.; No. 86 O'Brien, 2,541-2,760 feet, shot, 254 bbls. Lindsay & Bolin No. 1-B Wallis, 2,460-2,640 feet, shot, 47 bbls. through three-fourths inch choke. Reno Oil Co. No. 7 Hartage-Wilson, 2,347-2,480 feet, 309 bbls. through half-inch choke. Standard Oil Texas No. 43 Gordon, 2,400-2,525 feet, shot, 173 bbls. Texas and Pacific Coal & Oil Co. No. 21 James, 2,265-2,505 feet, 276 bbls. Tide Water Associated No. 41 Johnson, 2,490-2,620 feet, shot, 1,166 bbls. Joe A. Worsham No. 3 Reynolds,

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2,155-2,230 feet, plugged back to 2,200 feet, shot, 31 bbls. on pump.

Upton County

American Liberty Oil Co. No. 1 Robbins, 2,240 feet, plugged back to 2,238 feet, dry and abandoned. Arnold Oil Co. No. 5 Harrel, 2,135-69 feet, acidized, 387 bbls. after acidizing. Brown-Hancock Oil Co. No. 2-B Baker, 2,138-90 feet, acidized, 460 bbls. on pump. A. D. Devore No. 7 Burleson, 2,080-2,161 feet, acidized, 931 bbls. on pump. Falcon & Smith No. 1 Sherk, 2,633-69 feet, acidized, 1,146 bbls. Maverick Oil Co. No. 1 Holmsley, dry and abandoned 4,042 feet. Pittman and others No. 3 Elder, 2,230-85 feet, acidized, 750 bbls. Pure Oil Co. No. 6 Hughes, 2,415-2,550 feet, acidized, 493 bbls. on pump. Stanolind Oil & Gas Co. No. 47 Burleson, 2,030-2,109 feet, acidized, 130 bbls. on pump.

Winkler County

Bert Fields No. 3-A Cowden, 2,918-3,005 feet, 1,606 bbls. Gulf Oil Corp. No. 58 Daugherty, 2,815-3,155 feet, shot, 792 bbls. Humble Oil & Refining Co. No. 8-B Colby, 2,738-3,080 feet, shot, 535 bbls.; No. 18-C Colby, 2,801-3,110 feet, 1,307 bbls.; No. 16-C Walton, 3,058 feet, 1,007 bbls. Magnolia Petroleum Co. No. 96 Walton, 2,829-2,955 feet, shot, 698 bbls.; No. 99 Walton, 2,836-2,945 feet, shot, 1,011 bbls.; No. 103 Walton, 2,756-2,945 feet, shot, 1,038 bbls. Navarro Oil Co. No. 3 Drane, trustee, 2,726-3,090 feet, shot, 997 bbls. Olson Oil Co. No. 1 Cowden, 2,880-2,996 feet, shot, 520 bbls. Richardson Oils, Inc., No. 3 Humble-Walton, 3,230-3,428 feet, shot, 99 bbls. Sinclair Prairie Oil Co. No. 2 Vaden, 2,794-3,052 feet, shot, 655 bbls. Skelly Oil Co. No. 2-B Daugherty, 3,044-66 feet, 880 bbls. through 30/64-inch choke.; No. 6-A Leck, 2,740-3,100 feet, shot, 395 bbls.

Yoakum County

Bohago Oil Co. and Bond Oil Co. No. 1 West, 5,122-5,255 feet, acidized, 10,000 gallons, 50 bbls., elevation 3,660 feet. Siosi Oil Co. No. 1 Bennett 5,171-5,277 feet, acidized, 418 bbls.

NORTH TEXAS COMPLETIONS

Archer County

L. T. Burns No. 7 J. S. Bridwell A, 904 feet, dry Continental Oil Co. No. 1 G. E. McDaniel, 1,549 feet, dry. Fraser & Proctor No. 1 L. C. Garvey, 1,196 feet, dry. S. H. Huggins and others, No. 12 W. Ford, 1,802 feet, dry. Rathke Oil Co. No. 1 G. P. Meade H, 1,570 feet, dry. Shroeder and others No. 2 J. Conner, 1,112 feet, dry. Shappell Oil Co. No. 4 J. Conner A, 1,101-06 feet, 10 bbls. Van Wormer & Boller No. 6 Falls Co. 1,166-74 feet, 25 bbls. Westmount Oil Co. No. 2 T. J. Dempsey, 1,091-1,104 feet, 35 bbls.

Clay County

Bridwell Oil Co. No. 2 H. Boddy, 2,330 feet, dry. T. E. Sigler No. 1 G. W. Scaling, 1,210 feet, dry. Sussex Oil Corp. No. 6 C. J. Schumake, 1,131-39 feet, 65 bbls.; No. 7 C. J. Schumake, 1,446 feet, dry.

Cooke County

A. D. Robinson No. 8 J. H. Otto B, 1,285-1,300 feet, 53 bbls. Trumter Oil Co. No. 10 G. T. Andress, 763-79 feet, 45 bbls.

Montague County

Arco Oil Co. No. 5 N. J. Howard, 1,142-64 feet, 15 bbls.; No. 6 N. J. Howard, 1,138-79 feet, 27 bbls. Bridwell Oil Co. No. 2 Mrs. L. J. Cunningham D, 1,964 feet, dry. Sinclair Prairie and others No. 3 Rosa Hodges, 1,735-92 feet, 25 bbls.

Denton County

B. Bender and others No. 1 A. Dyer, abandoned location. Wilcox Oil & Gas Co. No. 1 D. W. Light, 2,519 feet, dry.

Wichita County

G. W. Cooper No. 29 W. T. Waggoner C, 1,418-50 feet, 15 bbls. Deep Oil Development Co. No. 1 Munger D, 3,582-3,876 feet, 1,500 bbls. Melat & Graham No. 1 Munger A, 3,720-3,887 feet, 1,150 feet. Pois & Schulz No. 2 Foster I, 855-65 feet, 15 bbls. S. H. Walton No. 1 Will Burnett, 466-503 feet, 25 bbls.; No. 2 Will Burnett, 515 feet, dry; No. 3 Will Burnett, 512 feet, dry. Wilson & Ligon No. 6 Foster, 1,700 feet, dry.

Wilbarger County

Golding Cochran No. 1 W. T. Waggoner R, 3,565 feet, dry. Humble Oil & Refining Co. No. 16 Waggoner H, 2,283-2,671 feet, 25 bbls.

Young County

S. S. Alexander No. 5-A Mrs. L. D. Clark, 875 feet, dry; No. 5-B Mrs. L. D. Clark, 860 feet, dry. C. E. Beavers and others No. 1 C. J. Taack, 800 feet, dry. Cable Oil Co. No. 38 S. E. Snider, 638 feet, dry. Eppenauer Drilling Co. No. 1 Hazelton, 4,248 feet, dry. B. C. Gilmore No. 1 Loftin Brothers, 630 feet, dry. Welsh & Lennen No. 1 George Garrett, 555 feet, dry. West & Honea No. 2 B. N. Honea, 817-28 feet, 100 bbls. Wootten & Wilson No. 1 Jeffery, 755 feet, dry.

PANHANDLE DISTRICT

Carson County

Cities Service Co. No. 6 Fuqua, 2,972-3,360 feet, 10,200,000 feet of gas. Skelly Oil Co. No. 87 Schafer, 3,045-3,121 feet, shot, 650 bbls. on pump. Texoma Natural Gas Co. No. 6 Schafer, 2,400-3,585 feet, 80,500,000 feet of gas.

Gray County

Cities Service Co. No. 6-B Hughey, 3,210-90 feet, shot, 350 bbls. on pump. Dolomite Production Co. No. 4 Sailor, 3,125-3,288 feet, shot, 331 bbls. on pump. Humble Oil & Refining Co. No. 8 Merten 3,140-3,279 feet, shot, 448 bbls. on pump. Kewanee Oil & Gas Co. No. 11 Arnold, 3,150-3,260 feet, shot, 971 bbls. on pump. King Oil Co. No. 5 Allam, 3,192-3,295 feet, shot, 335 bbls. on pump. Stanolind Oil & Gas Co. No. 3-A Cobb, 3,260-3,328 feet, shot, 620 bbls. on pump.

Hutchinson County

Cree and others No. 1 Harvey Sisters, 2,980-3,043 feet, shot, 608 bbls. on pump. Danube Oil Co. No. 3 Starns, 3,114-80 feet, shot, 988 bbls. on pump. Phillips Petroleum Co. No. 4 Haile, 3,054-3,105 feet, shot, 510 bbls. on pump. Dave Rubin No. 1 Barnhill, 3,190-3,254 feet, 60 bbls. oil and 32 bbls. water. Skelly Oil Co. No. 8 Watkins, 2,858-2,970 feet, shot, 644 bbls. on pump. Stanolind Oil & Gas Co. No. 9 Pitcher, 3,046-3,133 feet, shot, 608 bbls. on pump.

Moore County

Shell and others No. 1 Munson, 3,240 feet, plugged back to 3,077 feet, 8,600,000 feet of gas.

Wheeler County

Gillispie & Sons No. 2 McMurtry, 1,813-68 feet, 16,600,000 feet of gas.

Southwest Texas Fields

(Continued from Page 66)

field extension. The Ezzell field was carried over into Live Oak County by the completion of the R. P. Holland No. 1 Matkin, three-quarters mile northeast of the E. M. Jones production in the field proper. The semi-wildcat cored sands at 1,485-89 feet and 1,496-1,501 feet. Bottomed at 1,514 feet, the test came in making 180 bbls. per day on a pump.

In McMullen County the Adams & LeFevre No. 1 Selman, section 58, cored the Government Wells sand at 2,512-16 feet and 2,536-40 feet on a drill-stem test, 1,860 feet of mud, cut with a large percentage of oil and some brackish water, was recovered together with a light blow of gas. Operators are coring below 2,900 feet 2,900 feet.

Maverick County operations attracted some attention during the week when the Wellington Oil Co. No. 1 Chittim tried to blow out when operators were setting casing at 3,287 feet. The top of the Edwards was believed cored at 3,256 feet.

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Central West

By STAFF CORRESPONDENT

PERRY COUNTY'S DEEP TEST IS BARREN IN ST. PETER SAND

MATTOON, Ill., Sept. 27.—The southern Illinois fields averaged close to 18,000 bbls. a day in production the past week. Ten new oil wells were completed, but the dry holes abandoned, and shutdowns with no showings of oil were numerous. One deep test which penetrated the St. Peter sand in Perry County drilled into sulfur and salt water and was given up as a failure.

The completion record follows:

Ohio Oil Co. No. 2 Arbuthnot, NE NW NW section 8-3n-9e, Noble pool, Richland County, set 7-inch casing at 2,930 feet and got McClosky sand at 2,948-52 feet, total depth. It flowed and swabbed 89 bbls. of oil the first 24 hours. It was acidized with 2,000 gallons and later flowed 237 bbls. of net oil in 12 hours. It was then reacidized with 4,000 gallons and swabbed and flowed 664 bbls. of oil but "went dead." It was put on the pump and pumped and flowed 289 bbls. in 24 hours and was completed.

Mammoth Producing & Refining Co.'s test in SW SW NE section 34-4-9, which extended the Noble field to the north, flowed 1,504 bbls. the first day, 1,141 bbls. the second and 1,089 bbls. the third day from pay at 2,980-88 feet.

Keith & McManon No. 1 E. C. Taylor, a wildcat in Richland County, CSL SE NW section 12-3n-8e, was abandoned as dry at 3,099 feet.

Pure Oil Co. No. 9 Poppe, NW NW NW section 27-3n-8e, Clay County, was given three acid treatments and completed as a 180-bbl. well, producing from sand at 2,971-74 feet, 2,988-90 and 2,994-98 feet, total depth 3,010 feet.

Pure Oil Co. No. 8 Poppe, SW NE SE section 28-3n-8e, had pay at 2,772-80 feet and was completed after it had flowed 783 bbls. naturally in 24 hours.

Pure Oil Co. No. 1 D. L. Moseley, NW SE NE section 33-3n-8e, was a 180-bbl. completion from pay at 2,972-75½ feet.

Fitzgibbon & Myers No. 1 Shannon, important wildcat in Wayne County, SW NW SE section 26-2n-8e, was at a total depth of 3,067 feet. It flowed 15 to 20 bbls. per hour, 50 per cent water. It had not been completed.

Culberth & Washburn No. 1 Bergman, SE SE SE section 22-1s-5w, Washington County, had a hole full of water from sand at 947-97 feet and was abandoned at 1,000 feet.

The deepest test in the basin fields, J. H. Forrester No. 1 fee, C W half SW NW section 5-6s-1w, in Perry County, was abandoned at 5,153 feet, a hole full of sulfur water and salt water. It had topped Niagara lime at 3,110 feet, Trenton lime at 4,292 feet, St. Peter sand (the Wilcox of Oklahoma) at 5,136 feet in which it uncovered the water.

Bartelso Oil & Gas Co. No. 2 Schlarman, SW cor. SE SE section 5-1n-3w, Clinton County, had Bartelso sand at 990-1,016 feet. It was shot with 30 quarts at 993-1,013 feet and later pumped 146 bbls. in 36 hours and was completed.

In Marion County Adams Oil & Gas Co. No. 1 Underwood, SW cor. NE section 28-4n-1e, was completed in sand at 1,438-44 feet, which had been shot with 15 quarts. It pumped 67 bbls. the first day. Same company completed No. 3-A Wasem, CEL SE NW section 28-4n-1e. It is an 18-bbl. pumper at 1,417-45 feet. No. 6-A Wasem, of the same company, CWL SE NW section 28-4n-1e, was good for 10 bbls. initially from sand at 1,400-33 feet. Bivens and others completed No. 1 Krure and others, NW SW SE section 24-4n-1e. It was dry and abandoned at 1,461 feet. Frank Frederick and others No. 1 Hill, NE cor. section 28-4n-1e, had sand at 1,451-55 feet with 500 feet of fluid in the hole, one-third water, total depth 1,459 feet. Vickers and others finished a dry hole in No. 1 Farmer, SW cor. SE section 28-4n-1e. It had sand at 1,450-55 feet. Adams Oil & Gas Co. got a 75-bbl. well in No. 1 Boyd, SE cor. section 20-4n-1e, from sand at 1,403-21 feet.

The Decatur Herald recently made a survey by county of the present lease play in Illinois. Twenty-eight counties were covered by the survey. Seventy-five per cent of Bond County has been leased for oil and gas according to this survey. Leasing started in Clinton County two years ago and about 50 per cent of that county has been "signed up." Christian County is yet far below surrounding counties in the matter of acreage leased. Twenty per cent of Marshall County has been leased, 75 per cent of Clay County, and approximately 330,000 acres in Coles County. Four hundred new leases have been made in Crawford County in which the famous old Robinson field is located. Ninety per cent of Cumberland County is under lease, about 1,500 acres in Douglass County and 80 per cent of Edwards County. In Effingham County 260,000 acres are under lease, or nearly 87 per cent of the rural acreage. In Fayette County 355,000 out of 452,815 acres are sewed up. Nearly all of 4½ townships out of 12 in Franklin County are leased.

More than 2,400 leases have been recorded in Hamilton County; between 20,000 and 25,000 acres in Jackson County; 90 per cent of the acreage in Jasper County; 75 per cent of Jefferson County; 65 per cent of Marion County; 40 per cent of Montgomery County, and 12.8 per cent of Moultrie County. One-third of Perry County is leased for coal but 65 per cent of the remainder of the county has been leased for oil and gas; 90 per cent of Richland County; the southern half of Shelby; 75 per cent of Wabash; 80 per cent of Wayne; 80 per cent of Washington; 70 per cent of Williamson, and 8,750 acres in White County, where leasing only recently began. The survey did not include a dozen scattered counties where the play has perhaps not been so heavy. These include Schuyler, Menard, Macon, Sangammon, Greene, Macoupin, Gallatin, Saline, Clark, Edgar and Vermilion. There are 92 counties in the state and nearly half of these have been subjected to more or less leasing in the past two years.

Marion County

Roy Benoist and others spudded No. 1 Belcher, NW SE SW section 3-3n-1e, in Marion County; Adams Oil & Gas Co. No. 8-A Wasem, 100 feet from S and 1,100 from E lines of NW quarter, drilling at 1,415 feet; Cypress Oil & Gas Co. No. 5 C. Adams, SW cor. NE SW SW section 28-4n-1e, drilling at 1,194 feet; Dill & Cochrane No. 1 Logan, near C NE SW NE section 28-4n-1e, spudding; Reynolds and others No. 1 Doughett, NW cor. NE SE SW section 28-4n-1e, drilling at 340 feet; J. I. Staley No. 1 Ellen, SW cor. SE NE SW section 28-4n-1e, rigging up rotary; Alexander and others No. 2 Allison, NW SW SW section 33-4n-1e, derrick.

Adams Oil & Gas Co. No. 1 Ainscough, NW cor. NE section 28-4n-1e was shut at 1,618 feet. It had found no pay sand. Kirk D. Holland No. 1 Wasem, SE cor. NW SE SW section 28-4n-1e got salt water at 1,459-73 feet and plugged back to 1,463 feet. It was bailed, at first recovering some oil, but later all salt water.

Clay County Drilling

Southern Illinois Petroleum Corp. made location for No. 1 Duff and others, 1,000 feet from N and 1,925 feet from E lines of NW NE section 7-3n-8e, Clay County. M. O. K. Corp. has derrick up for No. 2 Bemis, SW SE SW section 14-3n-8e; Graham & Duncan, drilling water well at No. 3 Joint Stock Land Bank, NW SE NE section 8-2n-8e; J. V. Wicklund, derrick up for No. 2 McCauley, NW SW SE section 23-3n-8e; Pure Oil Co. No. 3 S. Bechtel, SE SE NW section 33-3n-8e, drilling at 2,163 feet; Pure Oil Co. No. 1 A. L. Moseley, SW NE NE section 33-3n-8e, shot with 30 quarts at 2,975-82 feet, the hole filled with oil and the crew was cleaning out; Pure Oil No. 2 Moseley, SW SE NE section 33-3n-8e, drilling at 1,718 feet.

Pure Oil Co. No. 4 B. Travis, SE NW NE section 33-3n-8e, had sand at 2,958-66½ feet, total depth 2,987 feet, and was swabbing. Seven-inch pipe was set at 2,921 feet and 2½-inch tubing at 2,952 feet. Pure Oil Co. No. 5 B. Travis, NE NW NE section 33-3n-8e, had Weller sand at 2,613-37 feet and pay at 2,958-59 feet. It flowed 200 bbls. in a 6-hour test, not completed. M. O. K. Corp. No. 1 Bemis, SE SE NW section 14-3n-8e, set 7½-inch casing at 2,964 feet, and 2½-inch at 3,009 feet. The mud was replaced by water. When swabbed there was only a showing of oil with the water brought up. It will be put on the pump to exhaust the water. Wiser Oil Co. No. 8 D. Smith SE SE SE section 21-3n-8e was at a total depth of 3,016 feet with 7-inch pipe centered on bottom. Standard tools were being rigged up with which to drill out the cement. J. V. Wicklund No. 1 McCauley SW SW SE section 23-3n-8e at a total depth of 2,999 feet tested salt and sulfur water on a 24-hour test. The crew was cleaning out.

Pure Oil Co. No. 2 Chaffin, SW NW SW section 27-3n-8e was drilling at 1,415 feet; Pure No. 10 Poppe, SE NE SE section 28-3n-8e, drilling at 440 feet; Pure No. 2 C. Wilkin, SE SE SW section 28-3n-8e, drilling at 2,663 feet and No. 3 C. Wilkin was at a total depth of 2,940 feet with 7-inch pipe set at 2,930 feet; No. 4 C. Wilkin NW SE SE section 28-3n-8e had pay at 2,972-75 feet; and 2,976-78 feet and was at a total depth of 2,988 feet and running 7-inch casing.

Wiser Oil Co. No. 6 D. Smith, SW SW NE section 28-3n-8e is a near completion. It tested 75 bbls. a day on the swab, total depth 2,981 feet. Wiser Oil Co. No. 7 D. Smith NE NE NE section 28-3n-8e replaced mud with water and swabbed salt water and a scum of oil. It will be put on the pump to try to exhaust the water.

Wiser Oil Co. No. 9 D. Smith SW NE NE section 28-3n-8e set 10¾-inch pipe at 200 feet and was drilling at 2,340 feet; Mammoth Producing & Refining Co. No. 1 Bemis, SE SW SE section 9-3n-8e, coring, total depth 2,709 feet; Southern Illinois Petroleum Corp., drilling at 500 feet in No. 1 Nodaker, NW SE SW section 23-3n-7e, Gordon Oil Co. drilling at 2,697 feet in No. 2 Joint Stock Land Bank, SE NE SE section 8-2n-8e; Graham & Duncan, drilling at 1,100 feet in No. 1 Joint Stock Land Bank, SE SE NE section 8-2n-8e; No. 2 on the same lease NE SE NE section 8, drilling at 505 feet; Pure Oil Co. No. 1 Brissenden, SE NE NE section 8-2n-8e, drilling at 2,664 feet. Pure Oil Co. No. 1 Schrugham, SW SW NW section 9-2n-8e, was drilling at 2,045 feet. The hole was crooked at 2,852 feet and was plugged back to 1,812 for redrilling. Pure Oil Co. No. 2 Staley, SW NW SW section 9-2n-8e was fishing for drill pipe at 9,940 feet, total depth. It had showings of oil at 2,655-63 feet and 2,666-87 feet. Leonard Bros. No. 1 Logan, SE SW NW section 2-3n-6e, was drilling at 2,070 feet. Pure Oil Co. No. 1 Staley, NW NW SW section 9-2n-8e was at a total depth of 3,195 feet with no pay sand showing. It was shut down. Carter, Porter & Goggins made a location for No. 1 Riggs, SE NE SW section 26-2n-8e, a wildcat.

Richland County Operations

In Richland County Pure Oil Co. No. 2 Wilson, NE SE NE section 33-4n-9e is spudded. Carter Oil Co. was rigging up rotary for No. 1 Watson, NW NW SW section 34-4n-9e; Mammoth Producing & Refining Co., preparing to start No. 2 Stanford & Heitz, SE SW NW section 34-4n-9e and had derrick up for No. 3 on the lease, NW SW NW section 34; R. Neely and others No. 1 R. Baughman, SE SE NE section 22-3n-10, drilling at 3,047 feet; Pure Oil Co. No. 2 Palmer-Taylor, SW SW SE section 5-3n-9e, drilling at 1,078 feet.

Pure No. 3 E. Walters, SW SE SW section 5-3n-9e, swabbed 302 bbls. of water and 20 bbls. of oil from sand at 2,952-58 feet which had been shot with 20 quarts. The crew was testing. Ohio Oil Co. No. 3 Arbuthnot, NW NE NW section 8-3n-9e, total depth 2,975 feet, was plugged back to 2,920 feet. Standard tools were being rigged up to drill the cement. No. 4 Arbuth-

not, NE NE NW section 8, was drilling at 1,975 feet; Southern Illinois Petroleum Corp., shut down for lack of water in No. 1 H. Allard, NW NW NW section 16-3n-9e; Pure Oil Co., drilling at 1,000 feet in No. 1 Wilson, SE SE NE section 33-4n-9e; Gordon Oil Co. and others No. 1 Park, SE SE SE section 14-3n-8e, drilling at 1,980 feet.

Wayne County

In Wayne County A. Bruner No. 1 Kuyoth, NW NW NW section 30-2n-8e, was shut down 2,994 feet, for repairs. Benedum & Trees, Inc., No. 1 Knapp, SE NW SW section 33-2n-7e, was drilling at 2,680 feet. Washburn Petroleum Co. No. 31-2s-6e was drilling at 2,450 feet.

Miscellaneous Operations

In Jasper County, Lewright and others had cellar and pits dug for No. 1 Wilkins, SW SW SW section 36-6n-9e.

In Clinton County, Elzy and others made a location for No. 1 Williams, SW NW SW section 1-3n-1w. Adams Oil & Gas Co. spudded No. 1 Yantis, C NW SE section 27-3n-1w.

In Edwards County, Leach Bros. No. 1 A. D. Lee, SW NE SE section 11-1s-10e, was drilling at 1,980 feet.

In Jasper County, Diamond Halff Oil Co. No. 1 Isley, C NW NW section 24-4n-8e was coring below 2,836 feet.

In Clark County, National Consumers Oil Co. No. 1 Minnie L. Jackson, NW NE NW section 21-11n-12w (measuring from central Indiana meridian) was plugged back from 2,428 feet, in Niagara Lime, to 2,352 feet to test a showing of oil.

In Washington County, Milliken and others No. 1 Lesseman, NW NW NW section 36-1n-2w, had a water sand at 1,323-54 feet, total depth 1,375 feet and was shut down for orders.

In Hamilton County Carpenter and others No. 1 Clarke, NW NW SW section 32-3s-5e, was drilling at 1,275 feet.

In Effingham County, Faurot and others No. 1 Lilly, SE SW SE section 16-8n-3e was fishing at 1,520 feet, total depth.

In Fayette County John Farrelly No. 1 Lilly SE cor. SW SE section 16-8n-3e was drilling at 830 feet. Carter Oil Co. No. 1 Miller, C W half NW NW section 12-8n-3e was at a total depth of 1,596 feet with showings of oil.

In Jefferson County, Dee & Carter No. 1 Hamilton, NE cor. SW NW section 20-4s-3e total depth 2,921 feet, recemented the 3-inch pipe and the crew was waiting for cement to set.

In Pope County C. C. Whitlock No. 1 Anthis, NW NW NE section 12-11s-5e was drilling at 1,056 feet. In Bond County, Whitehead and others No. 1 Polland, NW SE SW section 26-6n-2w was shut down at 2,423 feet. J. M. Huber was drilling at 1,585 feet in No. 1 Kunz, SE NW NW section 11-6n-5w. Parshall & Graham, were drilling below 1,320 feet in No. 1 Yockey, SW SW NE section 36-15n-2w.

In Randolph County, Mabee Consolidated Co. No. 1 Wilson, C E half SE NE section 3-4s-5w, was underreaming 6-inch to 1,862 feet.

In Bond County, Whitehead & Maury No. 1 Polland, NW SE SW section 26-6n-2w is shut down at 2,423 feet. The hole filled with water at 2,414 feet. J. M. Huber was drilling at 1,585 feet in No. 1 Kunz, SE NW NW section 11-6n-5w.

In Christian County, Parshall & Graham were drilling at 1,320 feet in No. 1 Yockey, SW SW NE section 36-15n-2w.

In Randolph County Mabee Consolidated Corp. and W. A. Delaney No. 1 Wilson, CEL SE NE section 3-4s-5w was underreaming 6-inch casing to 1,862 feet.

In Clinton County, Bell Oil Co. was drilling at 470 feet in No. 1 Maddox, CW half NW SW section 4-1n-3w. W. C. McBride, Inc., was drilling at 315 feet in No. 1 Koumerous, SW SE SE section 27-2n-3w and Schurman & Hays were underreaming 8-inch pipe to 1,060 feet in No. 1 Shipman, C S half SE SE section 4-1n-2w.

OHIO

LIMA, Ohio, Sept. 27.—Perhaps the most interesting oil well completed last week in Ohio was in section 6, Perry Township, Coshocton County. It was Preston Oil Co. No. 3 J. L. Myers. The well made 61 bbls. along with 53,000 feet of gas the first 24 hours after shot. Clinton sand was at 3,076-3,121 feet. In section 17, Newcastle Township, Coshocton County, H. E. Perkins No. 4 Mamie Ringwalt was abandoned with only a show of oil in the Clinton at 2,913-2,166 feet.

In Holmes County, Ohio Fuel Gas Co. No. 1 Charles Nussbaum, section 34, Ripley Township, gauged 279,000 feet of gas in Clinton sand at 3,270-82 feet. The well was shut in with a rock pressure of 1,025 pounds.

In Stark County, Obermiller and others No. 1 J. A. Wiliaman, section 18, Jackson Township, gauged 368,000 feet of gas naturally in the Clinton sand at 4,140-83 feet, total depth 4,243 feet, with a rock pressure of 1,225 feet. In section 21, Plain Township, Chamberlain & Gardiner No. 1 E. C. Fulmer, gauged 802,000 feet of gas in the Berea at 780-81 feet. The rock pressure was 160 pounds. In Lawrence Township, East Ohio Gas Co. No. 1 Harvey P. Rohr, section 1, was abandoned as a dry hole in the Clinton sand at 4,124-56 feet.

In Tuscarawas County, East Ohio Gas Co. No. 1 M. & H. Fuhrer, section 8, Franklin Township, gauged 1,332,000 feet of gas in Clinton at 4,284-4,301 feet. The rock pressure of the well was 1,420 pounds.

In Licking County, Blue Rock Oil Co. No. 4 B. L. Smith, section 14, Falisbury Township, made 65 bbls. of oil in the Clinton at 3,046-95 feet the first 24 hours after shot. In section 2, Hanover Township, Licking County, the North Fork Oil Co. No. 10 J. C. Williams made 7 bbls. of oil from the Berea sand at 762-73 feet.

In Lorain County, William Dempsey No. 4 Julia A. Clark, section 12, Carlisle Township, was abandoned as dry in the Clinton at 2,235-52 feet.

In Perry County, Ohio Fuel Gas Co. No. 159 Sunday Creek Coal Co., section 19, Monroe Township, was abandoned as dry in the Berea at 1,938-60 feet.

In Hocking County, the Preston Oil Co. No. 155 Sunday Creek Coal Co., section 11, Ward Township, made 30 bbls. of oil and 116,000 feet of gas the first 24 hours after a shot. The Clinton was at 3,387-3,427 feet.

In northwestern Ohio, in Seneca County, Liberty Oil Co. No. 4 Eli Rosenberger, section 25, made 8 bbls. of oil in the Trenton at 1,406-1,452 feet. In section 23 of the same township, Keiner and others No. 1 B. Meiswander made 6 bbls. of oil in the Trenton at 1,432-56 feet.

In southeastern Ohio, Ohio Fuel Gas Co. No. 1 L. E. Parks, section 4, Jefferson Township, Guernsey County, gauged 89,000 feet of gas naturally in the second Berea sand at 1,240-45 feet. A show of oil was encountered in the first Berea at 1,181-1,232 feet.

In Washington County, C. D. Uhl and others No. 4

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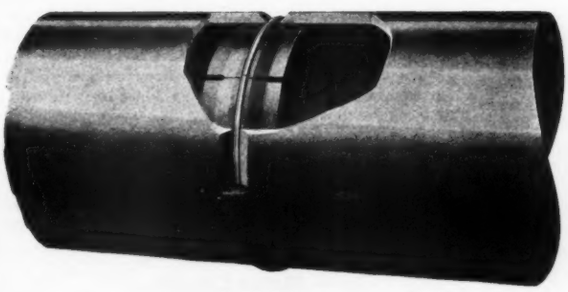

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John A. Huffman, section 22, Grandview Township, made 2 bbls. of oil after shot in the first Cow Run sand at 787-806 feet. In Lot 1073, Palmer Township, Burt and others No. 38 John Lightner made 3 bbls. of oil from the first Cow Run at 447-54 feet. In section 32, Warren Township, Anderson and others No. 4 Jacob M. Vickers made 4 bbls. of oil in the Stray sand at 1,286-96 feet. In section 30, Wesley Township, W. W. Watterson No. 17 Ray Evans was abandoned as dry in the first Cow Run sand at 477-85 feet.

In Vinton County, Kelch Brothers No. 1 John Cade, section 19, Clinton Township, gauged 107,000 feet of gas naturally in the Hamden sand at 683-708 feet.

In Noble County, Burbaker and others No. 3 F. M. Calland, section 32, Marion Township, gauged 50,000 feet of gas in the Injun sand at 1,180-97 feet.

In Monroe County, H. B. Walker No. 1 M. McVey, section 11, Washington Township, made 2 bbls. of oil and 85,000 feet of gas after shot in the Injun sand at 1,589-1,615 feet. It had been deepened.

In Morgan County, Blind Brothers No. 2 Clifton Blind, Lot 1091, Windsor Township, was abandoned as dry in the first Cow Run sand, total depth 425 feet.

In Huron County eight wells were completed by A. C. Leathers and others including No. 1 Davis, section 3, Hartford Township, a gas well good for 306,000 feet, initially; No. 1 Wolfe, Lot 6, section 3, Hartford Township, a light gas well at 745-850 feet; No. 1 R. Wolfe, Lot 60, section 3, Hartford Township, a gasser starting at 75,000 feet per day; No. 1 Chapin, Lot 4, section 4, Hartford Township, starting at 240,000 feet of gas at 769-844 feet; No. 1 Reynolds, Lot 13, Section 4, Hartford Township, a small gasser at 774-871 feet; No. 1 Carrie P. Hall, Lot 42, section 1, Bronson Township, starting at 25,000 feet at 670-796 feet; No. 1 Clarence Chandler, Lot 41, section 1, Norwalk Township, a small gasser and No. 1 Fewson, Lot 122, section 4, Townsend Township, a small gasser at 655-825 feet. Cross and others completed a gasser in No. 1 Robbins, Lot 162, Townsend Township.

WESTERN KENTUCKY

OWENSBORO, Ky., Sept. 27.—Fifteen oil wells, one of them a 100-bbl. well, and 11 dry holes, a total of 26 completions, comprised the record of the Western Kentucky fields in the past week.

The report by counties was as follows:

Hancock County

Easton district: J. C. Ellis No. 9 Hallie Mason, 50 bbls., Jett sand 260-73 feet, shot with 60 quarts; No. 15 R. A. Richards, spudding in; No. 21 Smith Heirs, 75 bbls., Jett sand 335-62 feet; No. 22 Smith Heirs, moving in; Chester Oil Co. No. 10 J. W. Baughn, dry hole through Jett sand, total depth 385 feet; No. 7 Bessie Fuqua, spudding in. J. H. Taulbee No. 2 Mitchell Freel, 10 bbls., Barlow sand 535-47 feet, shot with 90 quarts, total depth 552 feet.

Patesville district: Roy Beard No. 1 Patesville Church Lot, dry hole through Jett sand.

Cloverport district: Brenner & Adams No. 4 Robert Duke, drilling 150 feet.

Hawesville district: Tom Galey and others, No. 1 J. W. Holder, deep test, drilling at 1,500 feet.

Pellville district: Frank Damron and others No. 3 Elsie Bates, 10 bbls., Jett sand, 397-410 feet; No. 2 John T. Newton, drilling at 250 feet.

Daviess County

Pellville district: Rex Pyramid Oil Co. No. 2 Lonnie Cooper, dry hole, total depth 632 feet; No. 3 Rollie Cooper, location.

Habit district: Rex-Pyramid Oil Co. No. 1 L. Taylor, drilling 35 feet.

Cane Run School district: Rex Pyramid Oil Co. No. 13 Alice Hinton, dry hole through Jett sand. Ellis & Ashby No. 6 Lena Mayfield, 5 bbls., Jett sand.

Red Hill district: Gibson & Auknay No. 3 Kate Shiveley, rigging up No. 2 Ira Bryant, drilling 200 feet.

Ohio County

Fordsville district: Joe May No. 1 O. T. Cheek, spudding in.

Narrows district: Nollem Oil & Gas Co. and others No. 2 Annie Turnham, rigging up. Whitehouse Oil & Gas Co., No. 2 Joe Schultz, rigging up.

Ralph district: Snowden & McSweeney Nos. 21 and 22 J. J. Midkiff, 15 bbls. each from Jett sand.

Friendship Church district: Joseph B. Mayer No. 2 Tom Hamilton, 10 bbls., Jett sand. DeHart & Lykens No. 1 A. P. Kelly, 5 bbls., Jett sand. A. Teller and others No. 4 Estill Board, rigging up. Henry Scholl No. 5 Alex Whitehouse, dry hole, through Jett sand.

Dundee district: New Deal Oil & Gas Co. No. 11 O'Dell Heirs, 20 bbls., Jackson sand. Evans, Hunt & James No. 11 Cameron Heirs, 20 bbls., Jackson sand. Henry Scholl No. 1 Jodie Babbit, 10 bbls., Jackson sand.

Pellville district: A. Teller and others No. 1 Alonzo Jewel, moving in.

Horton district: Fred Hupp and others No. 1 Judge Newman, drilling at 525 feet.

Maxwell district: A. Carpenter and others No. 2 Herman Barr, dry hole through Jett sand, show of oil 876-80 feet, total depth 886 feet.

Heflin district: Callas & Bolling No. 4 Mrs. J. Simmerman, dry hole, 4 feet in Mississippi lime, total depth 1,292 feet.

McLean County

Cleopatra district: Hoosier Drilling Co. No. 2 Nannie Cook, Barlow sand 1,712-32 feet, underreaming to set casing on top of Barlow lime.

Maxwell district: Ellis & Huff No. 2 Ruth Shockley, spudding in.

Livermore district: The Petroleum Co. No. 14 Mrs. Bettie Cullen, dry hole through Bethel sand.

Island district: South-Penn Oil Co. No. 1 C. M. Markwell, 100 bbls. natural flow, Jett sand 1,456-76 feet; No. 1 Alma Nall, location; No. 1 Mrs. Rena Brown, deep test drilling at 1,770 feet.

Breckenridge County

Van Zandt district: J. C. Miller, trustee, No. 2 Whalen Heirs, dry hole, total depth 550 feet.

Falls of Rough district: A. V. Smith and others No. 1 Albert Huff rigging up.

Henderson County

Niagara district: Jay Petroleum Co. No. 3 T. J. Bond, Jr., 5 bbls., Niagara sand. Black Gold Oil Co. No. 9 C. M. Gish, 25 bbls., Niagara sand.

Webster Parish

Sebree district: Joel Bailey No. 1 G. T. Rideout, dry hole, total depth 540 feet; No. 2 G. T. Rideout, show of gas, total depth 519 feet, abandoned. P. A. Rowe and others No. 6 J. R. Ramsey, location for Corniferous test.

Crittenden County

Three miles southwest of Sullivan: Sellers and others No. 1 Kirby Walker, dry hole, no sand, total depth 1,226 feet.

Caldwell County

Two miles east of Farmersville: Hall & Booth No. 1 Tom Frenklin, drilling at 220 feet.

Hopkins County

Slaughters district: Imperial Oil & Gas Co. No. 1 Archibald Estate, still fishing at 2,550 feet.

EASTERN KENTUCKY

ASHLAND, Ky., Sept. 27.—Only one completion was included in the reports from Eastern Kentucky counties in the past week. It was a 10-bbl. oil well completed by Mrs. Agatha Wireman on the J. M. Townsend farm. This farm is on South Fork in the district by that name in Powell County.

Several other wells are nearing completion.

Knott County

The Kentucky-West Virginia Gas Co. was drilling Maxon sand at 2,110 feet in No. 5,228 on the Nancy Johnson land on Caney Fork in Knott County. The same company had reached the 2,230-foot level in well No. 553 on the Isom Gibson land, in brown shale, and in No. 554 on the Lark Slone farm on Jones Fork is down 2,345 feet in brown shale.

The Inland Gas Corp. is fishing for 10-inch bit at the 1,431-foot mark in No. 2 E. A. Hammonds, right fork of Troublesome Creek, and is still building rig for No. 1 Mayo Craft nearby. Inland is down 1,495 feet in No. 3 R. C. Kilgore, on the right fork of Troublesome Creek.

Martin County

The Kentucky-West Virginia Gas Co. is drilling dark lime at 1,483 feet in well No. 556 on the John Layne land in Martin County. The same firm is drilling at 1,211 feet, in Maxon sand, in No. 5,227 on the C. W. Preece land on Coldwater Fork and is moving in to start No. 5,226 on the same farm. Kentucky-West Virginia is idle at No. 5,230 on the Preece land.

Floyd County

The Inland Gas Corp. is fishing for an 8¼-inch bit in No. 1 Ollie Glenn Heirs on Levica Fork, Floyd County. The well is down 983 feet, in Salt sand. Kentucky Gas Corp. has rig up for No. 5,229 on the John W. Wood land on Porter Branch and is moving in to start No. 557 on the Ingram Stepp farm on Johns Creek.

Lawrence County

Kentucky Oil Producers is preparing to start No. 1 John Rose on Keaton's Fork of Blaine, in the Keaton district of Lawrence County. McKinster Brothers are still fishing for tools in No. 1 E. G. McKinster farm, on the righ hand fork of Little Blaine Creek. Cumberland Petroleum has reached the 900-foot mark in well No. 13 on the Dennis Conley farm.

Magoffin County

The Bed Rock Petroleum Co. is down 1,150 feet in well No. 10 on the W. M. Prater land on Prater Fork of Mash Fork in the Burton-Oil Springs district of Magoffin County. In the Burning Fork district, C. J. Sipple & Co. is almost ready to start drilling No. 7 W. M. Salyers on Birch Branch. Hupp & Duff and others are down 200 feet in well No. 12 on the B. F. Whitt land on Rock House Creek in the same district.

A. V. Hoenig was drilling below 600 feet in No. 9 L. M. Wheeler, on Litteral Fork in the Wheelersburg district.

Powell County

Petroleum Exploration is down 200 feet in No. 11 on the Lillie Belle Watson farm at Furnace.

Kansas Fields

(Continued from Page 70)

was deepened from 840 feet to pay in Kansas City lime at 1,128-30 feet, total depth, was acidized and pumped 40 bbls. of oil an hour, completed.

Chautauqua County

Craft No. 1-A Lagree, SE NW NE section 8-32-12, Chautauqua County, had sand at 665-87 feet, topped Siliceous lime at 1,904 feet, total depth 2,080 feet, plugged back to 687 feet and was completed as a 4-bbl. pumper.

C. C. Edinger No. 1 Chance, SW cor. section 34-34-12, was dry and abandoned at 1,037 feet, total depth.

Rush County

Ohio Oil Co. No. 1 Dirks, NE cor. section 25-18-16w, Rush County, had LaMotte sand at 3,497-3,515 feet, total depth 3,566 feet, plugged back to 3,517 feet and produced 9,000,000 feet of gas daily.

Scott County

Atlantic Refining Co. completed another producer in the Shallow Water pool of Scott County at No. 1 Pyle, C NE SW section 14-20-33w. It had Mississippi lime at 4,628-45 feet, total depth, pumped 200 bbls. of oil in the first four hours of potential test, 153 bbls. the next four hours and made potential of 920 bbls. It previously had swabbed 732 bbls. of oil in 24 hours. It is the fourth well in the pool.

Stevens County

Another gas well was completed in the Hugoton field of Stevens County. It was Panhandle Eastern Pipe Line Co. No. 1 Mason, C NW section 8-31-37w. At total depth of 2,831 feet, it produced 3,750,000 feet of gas.

California Fields

(Continued from Page 80)

reached a depth of 11,191 feet and the bit is going ahead in a barren gray sand. This well has not had any showings since passing through the oil sand found near the top of the Eocene but the Kettleman North Dome Association intends to continue drilling operations as long as mechanical conditions permit and the geological structure justifies. Superior Oil Co. No. 5 Huffman which is being carried down as a test of the Eocene in the Huffman area has reached a depth of 8,900 feet. Top of the Eocene is expected to be encountered in this area around 10,000 feet.

Union Oil Co. has completed No. 19 Del Rey in the Playa Del Rey field at 6,213 feet and brought the well in pumping 240 bbls. of clean 22.5 gravity oil per day.

Texas and Louisiana Gulf

THREE FIELDS OPENED AND ENCOURAGING INDICATIONS

By
F. L. SINGLETON

HOUSTON, Tex., Sept. 27.—The discovery of three new oil fields and the encouraging showings of two important wildcats held the attention of operators along the Gulf Coast district the past week. The three fields were brought in in widely scattered areas, extending southeast from Newton County on the Texas side to a point below New Orleans in Coastal Louisiana.

Humble Oil & Refining Co. No. 1 Federal Land Bank, on the North Crowley Prospect, central Acadia Parish, Coastal Louisiana, perforated casing at 8,092-8,102 feet and was completed for an initial daily production of 679 bbls. of 36-gravity oil through a quarter-inch choke with tubing pressure 1,750 pounds and casing pressure 1,750 pounds. Production is from the Heterostegina section just above the Marginulina horizon where a drill-stem test several weeks ago showed several hundred feet of pipe line oil. The hole was drilled to a total depth of 9,339 feet where mechanical trouble developed resulting in the hole being plugged back. Several attempts to complete the well at intervals below 8,100 feet failed when salt water was tested.

No. 1 Federal Land Bank is located on a geophysical prospect of several thousand acres approximately 10 miles north of the town of Crowley centering around section 34-8s-1e.

Shallow Oil Field in South Louisiana

The Potash structure, near the Mississippi River in southeast Plaquemines Parish, Louisiana, which proved to be a shallow salt dome structure a few weeks ago, was proven productive by the completion of Humble Oil & Refining Co. No. 11 Orleans Levee Board, which flowed 25 bbls. of 15-gravity oil per day through a quarter-inch choke with casing pressure 100 pounds. Sand just above the caprock was topped at 688 feet and was cored to a total depth of 696 feet. Seven-inch casing was cemented at 676 feet. The structure was developed jointly with the Texas Gulf Sulphur Co. and four shallow tests had already been drilled. Since the structure has been proven productive, all developments hereafter will probably be done by Humble Oil & Refining Co.

Along the Conroe trend in Newton County, Houston Oil Co. and Republic Production Co. No. 1 Peavy-Moore Lumber Co. perforated casing at 6,908-18 feet and is flowing 800 bbls. of fluid, of which 30 per cent is wash water, and the balance pipe line oil. It is reported, but not confirmed, that at the close of the week the fluid contained 1 per cent of brackish water. Working pressure on the tubing was 250 pounds and the casing 800 pounds. This is the first production for Newton County and the fourth oil field to be opened along this trend in the past few months. Location is in section 42, H.&T.C. Survey. The rig is being moved to No. 2 Peavy-Moore, about a quarter mile from the discovery in section 42. Protection acreage is held by the Gulf Oil Corp. and the Kirby Petroleum Co.

Watching Cedar Bayou

Attention along the Texas Gulf Coast is centered on the Cedar Bayou or West Cotton Lake Prospect, Chambers County, where Merit Oil Co. and others No. 1 T. & W. Wright showed 210 feet of 31-gravity oil and 1,160 feet of salt water on a 10-minute drill-stem test at 6,441-56 feet, with 25 pounds of working pressure. The test may be discredited to some extent due to the fact that the testing tool slipped several feet before opening. While no decision has been made, the hole will probably be carried to the Frio. The present showing was encountered in the Basal Marginulina section. The Discorbis was topped at 5,765 feet, Heterostegina at 6,066 feet and the Round Marginulina at 6,215 feet. The well is located in the western central part of the county in the Christian Smith Survey.

Amerada Petroleum Corp. has apparently marked up its second discovery in the Louisiana sector. No. 1 South Coast Corp., several miles southwest of the Bayou Des Allemands field, in Lafourche Parish, has sand and shale showing oil reported to have been cored at intervals from 5,241 to 5,279 feet, and the hole is being cored below 6,558 feet in search of a deeper sand. Location is in section 34-15s-19e.

Continental's Latest Discovery

Continental Oil Co. No. 1 Tate, the discovery well of the Villa Platte Prospect, Evangeline Parish, which opened the first production from the Cook Mountain horizon in Coastal Louisiana, flowed 265 bbls. of 52.4-gravity oil per day through various chokes on the last 24-hour gauge, with tubing pressure 2,150 pounds and casing pressure 2,350 pounds. Information released on the well shows the top of the sand section at 8,977 feet with the base of the sand at 9,038 feet. The Heterostegina was topped at 6,468 feet, Jackson at 7,592 feet, Vicksburg at 7,050 feet, Cockfield at 7,735 feet, Cook Mountain at 7,937 feet and the Sparta at 8,506 feet. No new locations have been announced for the field.

Harrison & Abercrombie No. 1 Christian Larsen, Old Ocean field, Brazoria County, has been completed for an initial daily production of 270 bbls. of 50 gravity oil through a five-thirty-seconds inch choke with tubing pressure 3,850 pounds. Casing pressure was sealed off. Production is from perforations at 10,630-44 feet, which makes it the deepest producer in the field.

Sandy Point Extended

To the northeast at Sandy Point, H. J. DeArman extended the field several hundred feet when it flowed 103.4 bbls. per day through a one-eighth inch choke with tubing pressure 1,100 pounds and casing pressure 1,200 pounds. Location is in Lot 47, of the David Talley Survey. Production is from a screen setting at 6,498-6,505 feet.

Heyser Extended

The Heyser field, Calhoun County, was extended 1,000 feet west with the showing of Gulf Oil Corp. No. 1 Traylor. On a 10-minute drill-stem test at 5,584-89 feet it showed 90 pounds of pressure and recovered 2,500 feet of oil. Seven-inch casing was cemented at 5,580 feet. This is the same sand which Normandie Oil Co. opened two weeks ago on the Cook lease. Recent developments in this field indicate a large field and it is the most active in the lower Gulf Coast district.

One mile south of the Satsuma field, Harris County, Hamil & Smith No. 1 Dopslauf, section 1, W.C.R.R. Survey, missed the main producing horizon, and is drilling below 6,940 feet in search of the Upper Saline Bayou horizon. In the field, Amerada Petroleum Corp. and others No. 1 F. A. Carpenter is bottomed in oil sand at 6,830 feet and casing is being run for a completion test.

V. H. Borsodi No. 1 Berlowits, the southernmost test in the south extension area of the Friendswood field, Harris County, topped sand showing oil at 6,107 feet and on a 13-minute drill-stem test at 6,100-17 feet, total depth, it showed 100 pounds of working pressure and 2,100 feet of oil with 100 feet of wash water with a brackish taste. While the test is assured of being a producer, the salt water content indicates that development is nearing the edge of the structure, which is expected to curtail drilling to some extent.

At the North Cheek field, Jefferson County, Magnolia Petroleum Co. was preparing to test No. 2 Phelan, 933 feet south of the discovery well in the S. Stevens Survey. Sand showing gas was cored at 8,667-70 feet; sand with no recovery from 8,670-75 feet; sand showing

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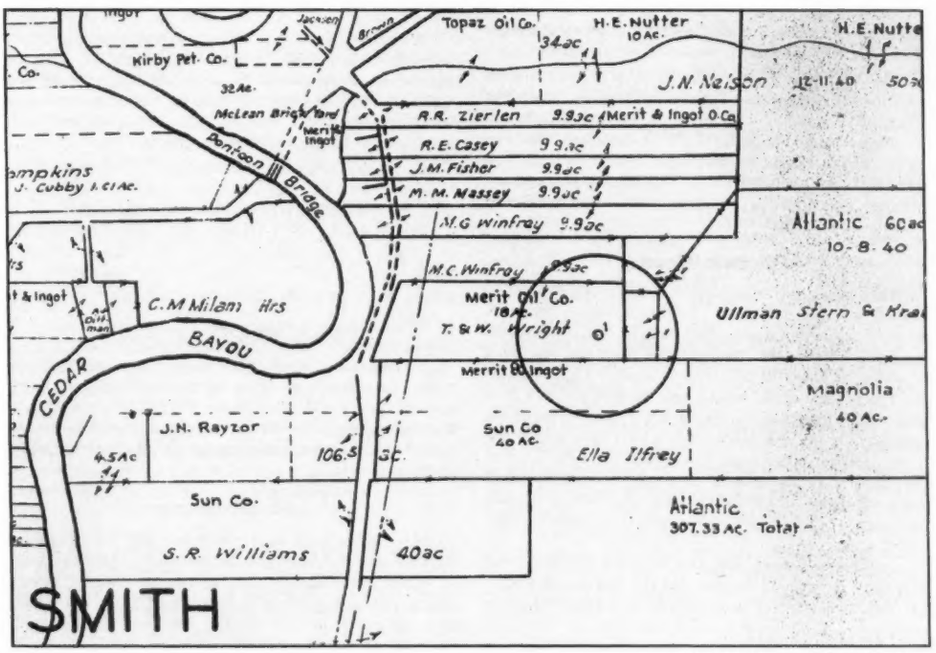


W. W. Zingery, Maps, Houston

Cedar Bayou Prospect, Chambers County, showing Merit Oil Co. and others No. 1 T. & W. Wright which gives indications of a possible pool opener

Michigan Field Report

By
O. C. PRESSPRICH

ISABELLA AND GLADWIN ARE GIVEN PROSPECT OF 2 POOLS

SAGINAW, Mich., Sept. 27.—With tests in previously unproved territory indicating two possible new Michigan oil pools, attention of oil operators the past week turned away from Buckeye Township, Gladwin County's prolific fields, which nevertheless continued to add producers in both the north (Wicklund) and south (Oard) pools.

Isabella County drew the brighter spotlight of interest, although several lesser lights in other Michigan fields flashed to claim some attention with possible importance problematical. The new Isabella field indicated in Nottawa Township gave promise through the favorable showings made by Boston Oil & Gas Co. No. 1 Clara Fox, NE NE NE of section 23. Oil in the hole mounted to 2,500 feet, with a considerable gas pressure behind it. Operations were shut down after 5-inch casing had been placed, and cleaning and swabbing operations were scheduled.

The well was reported to have been bottomed at 3,823 feet in either the Dundee or Monroe limestone. The oil was similar in character to Monroe oil found in the Vernon and Sherman pools of Isabella. The new strike, which operators said gave every indication of opening a new pool, is midway between the Vernon and Sherman pools, and approximately 6½ miles northwest of Mount Pleasant.

Gladwin County

What appeared to operators to be another prospective oil pool in unproved territory brought attention back to Gladwin County, but focused it on Beaverton Township. Mammoth Producing & Refining Co. No. 1 R. Nunn, in the NW NE NW of section 18, a wildcat about to be drilled in, topped the Dundee at 3,873 feet, higher than in either the Beaverton pool, 4 miles to the northeast, or in the south Beaverton pool, about the same distance to the southeast. With no wells producing, drilling or abandoned near the Mammoth-Nunn, operators appeared optimistic over possibilities of adding another big slice to Gladwin County's broad oil-producing acreage.

It appeared certain that the Nottawa Township development in Isabella County and the Beaverton Township well in Gladwin County would hold the interest of operators until definite establishment of the worth of the discoveries has been made. Opening up large areas for further prospecting appeared likely if the new wells prove of commercial value.

Three other wells situated just outside the limits of Buckeye Township in Gladwin County, and considered border tests for the bountiful Buckeye pool, also are bidding for attention.

In Tobacco Township of Gladwin County, located immediately south of the development in section 36, Buckeye Township, a dry hole this past week climaxed efforts at Rex Oil & Gas Co. No. 1 Griffin, in the NW NE NE of section 1. The well was a test in an effort to prove the extreme south (Oard) pool's oil-bearing formations extended southward from section 36, Buckeye, where many favorable producers are swelling the field's output. Definite abandonment instructions were issued on the test.

Another border test outside Buckeye, in Hay Township, lying east, close to the border line from section 12 development in Buckeye's north pool, was reported ready to drill in. It was Dibble Brothers No. 1 Ella Kimball in the SW SE NW of section 16. Favorable indications were reported, which operators said pointed to some production, although how important commercially could not be forecast. Hay Township already has recorded some producers, lending strength to prospects for favorable development of the Dibble-Kimball well.

The third wildcat, which has claimed more or less attention for three weeks, is Harold J. Hands No. 1 Hoyt-Smart in the N half NE NW of section 29, Bentley Township, 8 miles southeast of the proved south Buckeye territory. This well was reported as acidized with 1,000 gallons and showing favorably. Operators regarded the test as holding promise with possible production reported at 200 bbls. daily. But disinterested operators said the well would not produce more than 25 to 50 bbls. daily at present. However problematical the test, the territory surrounding it appeared due for further prospecting.

South (Oard) Pool

Buckeye development of the past week centered in the south (Oard) pool, with three producers furnishing the main interest.

Western extension of the Oard pool appeared likely when Rex Oil & Gas Co. No. 1 Arkwright, SW NW NE section 35, developed a reported 600-bbl. natural production. Territory to the west of the Rex-Arkwright well is undeveloped. The well fills out an entire north-south tier of development in section 35.

Schilling & Schrott No. 2 Nash, NE NW SE section 35, three locations south and one east of the Rex-Arkwright well, developed a 300-bbl. production after acid.

Bell & Marks No. 4 Lincoln Life, in the NW NE SE of section 35, an eastern offset of Schilling & Schrott's Nash well, topped the southern pool production list with a gauge of 1,000 bbls. daily after acid.

North (Wicklund) Pool

Developments of the week were sparse in the north pool, with interest centered chiefly on Wicklund Development Co. No. 3-K State in the NE SW SE of section 3. The hole filled with oil to the top of the Dundee, reported at 3,550 feet, and preparations were being made to acidize.

Isabella County

Pure Oil Co. No. 3 Baker, in the SE SW NW of section 33, Sherman Township, Isabella County, came in with an initial production exceeding 700 bbls. daily. While production was holding up, a dropoff from the initial flow will result in an acid shot, company officials said. McClanahan Oil Co. recorded a failure with its No. 4 Beutler, SE NE SW section 34. While the well logged several shows of oil, it failed to rate commercially and was scheduled for abandonment. In the Broomfield-Sherman pool, Pure Oil Co. No. 7 Willey, completed last week with an initial of 150 bbls. daily, was acidized and stepped up its production to 600 bbls. The well, in the NW NE NE of section 4, was given a 5,000-gallon acid shot. In Isabella Township of Isabella County, the western extension test of Wittmer Oil Co., No. 1 Robert Hovey, in the C S half SE SE of section 2, was preparing to enter the Dundee. Elevations were reported regular and a possible producer was indicated.

Saginaw County

A crew was rigging up Bridgeport Oil & Gas Co.'s wildcat, No. 1 Tobias, SE SW SW section 35, Bridgeport Township, Saginaw County. The prospective well is several miles from any new development, but by "ruler geology" would appear to have possibilities, lying between the old Saginaw pool and the Birch Run field.

Permits for 10 Counties

Oil explorations in 10 Michigan counties are authorized in the current week's list of drilling permits issued by the state conservation department, with Isabella and Montcalm, two of the old standbys, absent from the list for the first time in many weeks.

Gladwin County, scene of the prolific Buckeye pool, took four of the week's 18 permits, three of them for proved areas and one for an edge test. Arenac County also took four, three in Adams Township and one in Clayton, scene of a determined new effort to develop a sizable natural gas reserve for the company supplying Saginaw, Bay City, Midland and Lansing. There also were three for Midland County, on the borders of the Porter and Jasper pools.

The other seven permits are scattered through seven counties, most of them wildcat tests. They permit drilling in Allegan, Bay, Huron, Muskegon, Newaygo, Ogemaw and Saginaw counties. The Huron County test is in Bloomfield Township, within 4 miles of the Lake Erie shore.

Gulf Coast Fields

(Continued from Preceding Page)

gas at 8,675-77 feet, and oil sand from 8,677-82 feet, the total depth. Seven inch casing was cemented at 8,660 feet.

Two new locations were announced for the recently opened Hitchcock field, Galveston County. Merit Oil Co. No. 1 Stewart Title Guaranty Co. is in the SE cor. of Lot 16, Block T, in the J. B. Moore League, while N. W. Hunter No. 1 Stewart is located in Block Y of the J. D. Moore League. Rigs are being moved in for both tests.

Bay and Gulf Locations

Permit for drilling a wildcat in Galveston Bay has been filed with the war department's offices at Galveston by Standard Oil Co. of California and Salt Dome Oil Corp. The proposed location is near Houston point in the N cor. of track No. 118. These two companies jointly carried on an extensive geophysical program in Galveston Bay and own several hundred acres in various parts of the bay. This is the third location to be made for tests in the bay and the Gulf of Mexico. Offshore, about a mile from Cameron Parish, Superior Oil Co. is rigging up No. 1 State, while Humble Oil & Refining Co. is expected to start drilling operation on its project offshore from Jefferson County, both in the Gulf of Mexico.

On the McFaddin Prospect, southeastern Jefferson Parish, Shell Petroleum Corp. is dredging canal for No. 1 W. P. H. McFaddin, 2,200 feet south of the north line of the S. A. Pace Survey No. 2, and 1,320 feet east of the east line of W. P. McFaddin Survey No. 22. It is located in the southwestern part of the county near the Gulf of Mexico.

Preparations are under way by the Herton Oil Co. for a production test of a 10,000-foot horizon at the Jeanerette field, St. Mary Parish, in Coastal Louisiana. No. 1 Banta-Roanes, section 40-13s-9e, cored oil sand at 10,278-88 feet and from 10,355-74 feet. The hole is bottomed at 10,480 feet and casing is being run for a production test.

In the Lirette field, Terrebonne Parish, Humble Oil & Refining Co. No. 1 Ellender, originally completed as the world's deepest producer in a 11,000-foot horizon, has been completed for a distillate producer through perforated casing at 10,546-48 feet. Initial production was 2 bbls. of distillate per day through a one-eighth inch choke, with tubing pressure 3,900 pounds. It was plugged back from 11,611 feet due to salt water intrusion.

There were two wildcat locations reported for this district. In southwestern Acadia Parish, Gulf Oil Corp. is rigging up for No. 1 Eucia Broussard in section 49-10s-2w, while in Jefferson Davis Parish, Union Sulphur Co. has staked No. 1 Calcasieu National Bank in the NE quarter of section 12-9s-6w.

East and East Central Texas

By L. E. BREDBERG

DEAD WELLS WILL BE TAKEN OFF PRORATION SCHEDULES

DALLAS, Tex., Sept. 27.—The second test on the Opelika structure in northeastern Henderson County, being drilled by the Tide Water Associated Oil Co., Seaboard Oil Co. and Humble Oil & Refining Co., on a jointly held block, is not encouraging. It is drilling in the Travis Peak, last objective of the test, after it failed to make a producer either in the Paluxy or Glen Rose. It is down 9,095 feet, and will no doubt be abandoned at 10,000 feet unless it starts showing oil sufficient to test before that depth is reached.

The first test drilled on this structure, No. 1 McElreath and Suggett, in the W. P. Wyche Survey, made a small producer last summer when it was completed flowing through drill stem, which had to be cemented in the hole and used for a flow string when it became stuck about 30 feet off bottom. Total depth of the hole was 7,195 feet, in the Glen Rose. The pay was topped at 7,185 feet.

The second test is one of the most important, if not the most important, in the district, although it has rapidly lost interested followers since it passed up the Glen Rose. It will be the deepest test ever drilled in the district, the deepest being a well in the Lake Long field, drilled by the first two of the above three named companies.

Another wildcat in Henderson County, Sherman Hunt No. 1 Dillard, located in the H. Jeffries Survey, 16 miles north of Trinidad, and in the northwestern part of the county, showed oil stains carrying an odor of oil in a core showing some porosity when drilling between 3,085 and 3,100 feet. It is now drilling below 3,100 feet.

Wildcatting

McCleod and others are rigging up on the F. Boltin farm, in the J. R. Cockrill Survey, 4 miles northwest of Rosebud in Falls County, for a wildcat test.

The test to be drilled by J. K. Hughes on the Don S. Foster farm in the C. E. Gray Survey, 1 mile southeast of Kirven, in Freestone County, is rigging up. It is on the old Kirven-Simsboro structure between Teague and Kirven, and Mr. Hughes holds a block of some 9,000 acres around the location, a large portion of which was previously held by the Texas Co. If the Woodbine sand does not prove productive the test may be drilled to the Paluxy or Glen Rose (Trinity members) in search of deep production.

Possible Trinity Test

The Humble Oil & Refining Co. has been assembling a big block centering in the John Vaughn, U. Moore and adjacent surveys in the northwestern corner of Cherokee County, having already taken some 14,000 acres, on which it is believed a Trinity test will be drilled. Several Woodbine sand failures have already been drilled in the area in which the block is located, which precludes the possibility of another Woodbine test, but points to deep drilling.

Three wildcat tests were abandoned in the East Texas district this week, one each in Rusk, Bowie and Morris counties. The latter two were deep tests. The one in Bowie County was drilled by McKenzie & Bentley on the Lumpkin farm, 1 mile southwest of Dalby Springs. It was given up at 5,690 feet, elevation 290 feet. The Morris County test was drilled by J. O. Whittington on lands of the Joiner Leasing Co., in T.C.R.R. Survey No. 734, 8 miles northwest of Naples. It topped the Georgetown at 4,089 feet and was abandoned at 5,014 feet, elevation 264 feet.

The Rusk County test, located 5 miles north of New Salem, was drilled by J. Merrick and others on the Tipps lands, in the T. Uzzell Survey. It was abandoned at a total depth of 3,888 feet, with an elevation of 367 feet.

George W. Stuck and others of Chickasha, Okla., who have been assembling a large block in the northeastern part of Fannin County, are scheduled to move in derrick and start drilling a 4,500-foot test on lands of the Federal Insurance Co., in the Burke Survey, as soon as some title troubles are eliminated. The operators have assembled some 12,000 acres so far.

W. W. Lechner of Dallas is preparing to drill on a block of 7,000 acres assembled by W. T. Nowlin and R. M. Hudnall, near Chatfield, Navarro County. Location will fall on the John C. Easterling farm about three-quarters of a mile south of Chatfield. If the Woodbine sand does not pay off, it will probably be carried to the Trinity.

East Texas Field

After Bryan Payne, independent operator of Tyler, who has production in the East Texas field, participated in a discussion with E. O. Thompson of the Texas Railroad Commission during the regular monthly hearing on fields held by the commission his words were taken under serious advisement, as the commission ordered all wells in the East Texas field checked to determine the number not producing their allowable and those standing "dead," which no doubt in many instances leads the owners to make up their allowables by taking the oil from other wells on the same lease.

The commission is now checking all fields of Texas systematically, according to Col. Thompson, to eliminate all dead wells from the commission's proration schedules. He also said, "It is our aim to ascertain exactly how much oil the submarginal wells are actually able to produce so that these wells can be allowed no more oil on the proration schedule than this particular well can actually produce.

"This is aimed to prevent the making up from better wells on the lease of a producer the deficiency caused by dead or submarginal wells being unable to make what the schedule erroneously indicates the allowable to be.

"Where several wells on a lease are operated through a common flow line the commission in a state wide order, is requiring check valves to be installed on the flow lines from each well near the christmas tree to prevent obtaining oil from one well when the oil is supposed to come from another well."

Mr. Bryan has worked long and arduously to eliminate some if not all of the alleged illegal production in the East Texas field, and has been a staunch backer of proration in this and other fields.

EAST TEXAS FIELD

Gregg County

Amatex Oil Co. No. 7 Jones, 3,596-3,614 feet, 40 bbls. per hour. Amerada Petroleum Co. No. 16 Continental State Bank, 3,584-3,623 feet, 54 bbls. per hour; No. 14 Killingsworth, 3,572-3,602 feet, 48 bbls. per hour. Atlantic Refining Co. No. 85-A Judge, 3,514-3,637 feet, 70 bbls. per hour; No. 87-A Judge, 3,490-3,632 feet, 65 bbls. per hour; No. 79 Moore, 3,508-3,638 feet, 80 bbls. per hour; No. 83 Hayes, 3,500-3,600 feet, 56 bbls. per hour.

Deep Rock Oil Co. No. 15 Jones, 3,592-3,623 feet, 20 bbls. in 15 minutes. Fleming & Kimball No. 10 Barnes, 3,600-09 feet, 20 bbls. in 20 minutes. General Crude Oil Co. No. 12 Barnswell, 3,489-94 feet, 63 bbls. per hour. Gulf Oil Corp. No. 84 Judge, 3,498-3,515 feet, 60 bbls. per hour. Humble Oil & Refining Co. No. 19 Hughes, 3,594-3,603 feet, 60 bbls. per hour; No. 14 Willingham, 3,657-58 feet, 45 bbls. per hour.

J. Long Drilling Co. No. 26-A Owens, 3,558-71 feet, 30 bbls. in 30 minutes. J. McMurrey No. 5 Snoddy, 3,557-95 feet, 40 bbls. in 30 minutes. Magnolia Petroleum Co. No. 6 Fuller, 3,680-81 feet, 80 bbls. per hour; No. 12 Todd-Stinchcomb, 3,563-75 feet, 114 bbls. per hour. Shell Petroleum Corp. No. 25 Burnside, 3,509-3,629 feet, 30 bbls. in 30 minutes; No. 26 Burnside, 3,502-26 feet, 32 bbls. in 30 minutes. Stanolind Oil & Gas Co. No. 5-B Snoddy, 3,570-3,629 feet, 61 bbls. in two hours; No. 7 Boles, 3,540-83 feet, 65 bbls. per hour.

The Texas Co. No. 24 Lee, 3,544-52 feet, 23 bbls. in 20 minutes. American Liberty Oil Co. No. 37 Sabine River tract, 3,508-17 feet, 60 bbls. per hour. Arcadia Refining Co. No. 19 Samples, 3,757-58 feet, 20 bbls. per hour. Atlantic Refining Co. No. 18 Griffin, 3,545-3,664 feet, 52 bbls. per hour. B. R. Bird No. 1 Wells, 3,678-3,714 feet, dry and abandoned. Potter Brothers No. 1 Crim, 3,550-62 feet, 45 bbls. per hour; No. 1 Laird, 3,550-62 feet, 45 bbls. per hour. Everts Drilling Co. No. 3 Cook, 3,656-58 feet, 97 bbls. per hour. L. O. Gandy No. 3 Benson, 3,603-09 feet, 22 bbls. per hour.

Gulf Oil Corp. No. 98 Hilburn, 3,509-22 feet, 60 bbls. per hour. Hamil & Smith No. 2 Butts, 3,555 feet, 28 bbls. in 30 minutes. Hastings & Dodson No. 2 Hughey, 3,537-44 feet, 200 bbls. in four hours. Perot Oil Co. No. 7 McNeely, 3,627-29 feet, 30 bbls. in 45 minutes. Potter Brothers No. 1 Dickson, 3,550-62 feet, 45 bbls. per hour. H. Schulman No. 3 Dorris, 3,521-40 feet, 10 bbls. in 30 minutes. Sun Oil Co. No. 51 Cole, 3,510-64 feet, 40 bbls. per hour. W. C. Turnbow No. 8 Clary, 3,543-51 feet, 17 bbls. in three hours on air lift.

Rusk County

Gulf Oil Corp. No. 18 Jernigan, 3,653-61 feet, 50 bbls. per hour. Houston Oil Co. No. 7 Brightwell, 3,647-57 feet, 65 bbls. per hour. Magnolia Petroleum Co. No. 16 Bean, 3,580-3,610 feet, 20 bbls. in six hours on pump. Arkansas Fuel Oil Co. No. 15 Ferguson, 3,646-71 feet, 24 bbls. in 15 minutes. British American Oil Co. No. 16 Kangerga, 3,593-96 feet, 40 bbls. in 30 minutes. Davis & Hart No. 2-C Perry, 3,647-3,711 feet, dry and abandoned. Elm Oil Co. No. 4 McElroy, 3,749-53 feet, 20 bbls. in 35 minutes. G.B.R. Oil Co. No. 19 Harmon, 3,730-45 feet, 86 bbls. per hour. Humble Oil & Refining Co. No. 55 Blackwell, 3,657-59 feet, 69 bbls. per hour; No. 23 Box, 3,747-57 feet, 81 bbls. per hour.

Hunt Oil Co. No. 14-F Bradford, 3,530-3,617 feet, 20 bbls. in two hours on pump. P. G. Lake No. 6-C Lee, 3,753-55 feet, 31 bbls. in three hours through one-quarter inch choke. Dearing & Sons No. 15 McDavid, 3,671-3,700 feet, 20 bbls. in three hours on pump. J. M. Rush No. 5-B Cooper, dry and abandoned. Sinclair Prairie Oil Co. No. 2 Ashby, 3,708 feet, dry and abandoned; No. 14-A Wilson, 3,622-27 feet, 20 bbls. in 20 minutes. Venable and others No. 9 Flanagan, 3,627-39 feet, 60 bbls. in 30 minutes. Ward Oil Co. No. 17-A Finney, 3,711-47 feet, 47 bbls. per hour.

Smith County

American Trading & Production Corp. No. 11 Cook, 3,710-11 feet, 66 bbls. in 40 minutes. Goldsmith No. 1 Wiley, 3,759-60 feet, 37 bbls. per hour through one-quarter-inch choke. McMurray Oil Co. No. 26 Turner, 3,797-98 feet, 25 bbls. in 30 minutes. Magnolia Petroleum Co. No. 42 Wright, 3,668-80 feet, 31 bbls. in 15 minutes.

Upshur County

Delta Drilling Co. No. 5 Adkins, 3,721-23 feet, 20 bbls. per hour. Dean Brothers and others No. 1 Godfrey, junked and abandoned. General American Oil Co. No. 21-A Sanders, 3,598-3,601 feet, 22 bbls. in 15 minutes. M. Johnston No. 7 Williams, 3,690-97 feet, 20 bbls. in 20 minutes. W. L. Pickens No. 3 Free, 3,729 feet, 36 bbls. in 40 minutes. Rudco Oil & Gas Co. No. 3 Nicholson, junked and abandoned 2,600 feet. Skeeter & Day No. 1 Crosby, 3,744-51 feet, dry and abandoned.

EAST CENTRAL TEXAS COMPLETIONS

Anderson County

Tide Water and others No. 26-A Wills, 4,082-92 feet, 151 bbls. through one-eighth inch choke.

Bowie County

McKinzie & Bentley No. 1 Lumpkin, dry and aban-

doned at 5,690 feet, elevation 290 feet, 1 mile southwest of Dalby Springs.

Franklin County

C. Camp and others No. 1 D. P. Dean, 4,264-4,314 feet, 40 bbls. in two hours on pump. Dean Brothers No. 1 Bolin, 4,241-4,332 feet, 22 bbls in two hours on pump. Grey & Wolfe No. 2-A Bolin, 4,243-4,320 feet, 295 bbls. on pump. Humble Oil & Refining Co. No. 1 Prince, 4,200-4,312 feet, 444 bbls. on pump. Werby & True No. 2 Sanders, 4,230-95 feet, 170 bbls. on pump.

Hopkins County

Shell Petroleum Corp. No. 6 Reynolds, 4,505-20 feet, 94 bbls. per day. The Texas Co. No. 3 E. Davis, 4,522-44 feet, 35 bbls. per day.

Morris County

J. O. Whittington No. 1 Joiner Leasing Co., dry and abandoned 5,014 feet, elevation 264 feet, 8 miles northwest of Naples.

Rusk County

J. Merrick and others No. 1 Tipss, dry and abandoned 3,888 feet, elevation 367 feet, 5 miles north of New Salem.

Titus County

Cable Tool Drilling Co. No. 3 Edwards, 4,265-4,310 feet, 201 bbls. on pump. G.M.&W. Oil Co. No. 5 Edwards, 4,270-4,318 feet, 122 bbls. on pump. Humble Oil & Refining Co. No. 7 Batson, 4,223-4,333 feet, 316 bbls. on pump: No. 4 Fry, 4,274-4,305 feet, 253 bbls. on pump. A. McCutchin No. 1 Hargrove, 4,292-4,340 feet, 75 bbls. on pump. Tide Water Associated No. 8 Wilson, 4,238-96 feet, 190 bbls. a day; No. 9 Wilson, 4,232-76 feet, 432 bbls. on pump.

Oklahoma Fields

(Continued from Page 78)

Gregg Sawyer No. 3 Jackson, NW NE SE section 14-19-9, topped Bartlesville sand at 2,165 feet and was dry and abandoned at 2,217 feet, total depth.

J. P. Brady & Sons No. 5 Duncan, SE NW NE section 19-19-9, found Red Fork sand at 2,433-58 feet, total depth 2,472 feet, and pumped 5 bbls. of oil daily.

Gregg Sawyer No. 1 Adams, C E½ NE NE section 23-19-9, produced 1,400,000 feet of gas daily and was completed in Cleveland sand at 1,229-75 feet, total depth.

Curtis Oil Co. and others No. 1-A Smith, SW SW NE section 34-19-9, found Cleveland sand at 1,402 feet, total depth 1,472 feet, and was dry and abandoned.

First reports of new activity in Creek County: Sinclair Prairie Oil Co. No. 1-A Estate Land Co., NE NW NW section 10-17-7, rigging up rotary; J. O. Smith and others No. 2-A Massey, NW NE NE section 13-17-10, spudded to 100 feet; George Marble No. 2 Van Emmons, SE NE NE section 13-19-7, cellar.

Marshall County

F. W. Merrick, Inc. No. 1 Robinson, NE cor. section 33-7s-4e, was location for a wildcat near the Red River in southwestern Marshall County.

Okfuskee County

Prince & Anderson No. 1-A Barnett, NE SW SE section 35-11-11, Okfuskee County, topped sand at 1,689 feet, total depth 1,732 feet, was shot and swabbed 28 bbls. of 39 gravity oil in 8 hours, completed.

Muskogee County

Eagle-Picher Lead & Zinc Co. No. 1-A Smith, SE NE NW section 13-13-15, Muskogee County, was dry and abandoned at 2,172 feet, total depth.

J. E. Rose No. 1-A Austin, NE cor. section 32-15-15, was dry and abandoned at 1,385 feet, total depth.

Carter County

Kewanee Oil & Gas Co. No. 4 Willis, NW NE SE section 6-4s-3w, an old Carter County well, was deepened from 1,127 feet to 1,327 feet, plugged back to 1,230 feet, pumped 5 bbls. of oil daily and was recompleted.

Wasteka Oil Co. No. 1-A Burton, NE NW NW section 31-1s-2w, was bottomed at 2,552 feet, perforated casing at 2,382-2,502 feet and pumped 8 bbls. of oil daily. Same company's No. 2 Burton, SE NW NW section 31-11s-2w, was completed as an 8-bbl. pumper at 2,622 feet, total depth.

Carlos Wagner No. 1 Brady, SE NW NW section 4-2s-2w, an old well drilled deeper, was dry and abandoned at 1,675 feet, total depth.

Roy M. Johnson No. 20 Davis, SE SE NW section 6-4s-3w, was dry and abandoned at 1,264 feet, total depth.

First reports of new Carter County operations: Daube No. 30 fee, SW SW SE section 14-4s-3w, pits; Tuesday Oil Co. No. 1 Williams, NW cor. section 5-1s-3w, building derrick; Samedan Oil Co. No. 2 Thomas, SW SE NW section 7-2s-2w, location.

Stephens County

Sunray Oil Co. No. 1 Hefner, SE SE NW section 12-1n-5w, Doyle area, Stephens County, had Deese series at 3,797-3,817 feet, total depth, and swabbed and flowed 248 bbls. of oil in 28 hours.

Texas Co. No. 1 Graham, SE SW NE section 12-1n-5w, was bottomed at 3,874 feet, perforated casing and produced 8,500,000 feet of gas, completed.

M. Green No. 8 Green, NE NE SE section 27-1s-5w, topped sand at 738 feet, total depth 765 feet, and was completed as a 2-bbl. pumper.

Caddo County

Magnolia Petroleum Co. No. 1-A Cement-Hinley, NE NE SE section 35-6-10w, Cement field, Caddo County, had sand at 3,270-91 feet, broken sand 3,291-3,310 feet, total depth 3,374 feet, flowed 1,569 bbls. of 34 gravity oil in 24 hours, through choke, with 12,000,000 feet of gas, completed.

Comanche County

Shaw & Andrews No. 1 Rowell, NW SE SE section 21-2n-10w, Comanche County, topped pay at 792 feet, total depth 1,004 feet, and was completed as a 2-bbl. pumper.

First Reports

Bridwell Oil Co. No. 16 Wahlgemuth, SW NE NE NW section 30-6s-5w, Jefferson County, was drilling at 400 feet. Carter Oil Co. No. 1 Kerns, SW NE SE section 21-3n-5w, an old Grady County well being deepened from 1,701 feet, was drilling in top of oil sand at 1,735 feet.

Eastern Fields

(Continued from Page 68)

test on the Charles Colvin farm to 1,793 feet and it was dry.

In Roane County, F. F. McIntosh completed No. 4 McIntosh & Norman in Curtis district in the Salt sand and it is good for 5 bbls. a day after shot. In this district, the Witago Oil Co. drilled a test on the H. E. Guthrie farm through the Salt sand to 1,870 feet and it was dry and is being abandoned.

Gas Wells

In Braxton County, the Pittsburgh & West Virginia Gas Co. completed a test on the J. C. Carr farm in Otter district in the Salt sand at 1,516 feet and it is a gas well gauging 500,000 feet a day.

In Cabell County, C. C. Wolfe and others completed a test on the C. F. Freeman farm in Guyandotte district as a gas well at 2,979 feet. The Big lime was at 1,330-1,511 feet; Big Injun, 1,540-1,680 feet; Berea, 2,100-16 feet; Brown shale, 2,400-2,959 feet, with 268,000 feet of gas at 2,648-2,979 feet. In Grant district, the Stamikin Gas Co. deepened No. 1 Berta White to 3,558 feet. The Big Injun was at 1,597-1,774 feet; Berea, 2,155-82 feet; Brown shale, 3,226-3,535 feet, with 94,000 feet of gas at 3,233-3,535 feet. In McComas district, the Kentucky West Virginia Gas Co. completed a test on the J. E. Morrison farm as a gas well at 3,664 feet. The Big Lime was at 1,719-1,879 feet; Big Injun, 1,935-2,015 feet; Berea, 2,488-2,500 feet; Brown shale, 3,280-3,525 feet, with 94,000 feet of gas at 2,972-3,664 feet.

In Calhoun County, the Henderson Oil Co. completed a test on the E. R. Wilson farm in Washington district at 2,264 feet as a gas well. The Big lime was at 2,100-85 feet, with the Big Injun at 2,185-2,264 feet; gas, 2,201-17 feet. The gas gauges 1,000,000 feet a day. In Sherman district, Ivy Gainer completed No. 2 A. H. Stump in the Big Injun sand at 1,946 feet as a gas well gauging 500,000 feet a day.

In Gilmer County, the Hope Natural Gas Co. completed No. 7,770 Bennett in Center district at 1,335 feet. The first Salt sand was at 1,262 feet with over 1,500,000 feet a day at 1,286-96 feet. In this district, Phillip D. Phillips completed No. 4 Belinda R. Fetty at 2,331 feet, with 58,000 feet of gas from Big Injun sand at 1,647-60 feet. In the same district, P. P. Gunn and others completed a test on the A. H. Stump farm at 1,912 feet; Big Injun, 1,698-1,788 feet; 47,000 feet of gas at 1,748-88 feet. In the same district, Thomas Kennedy and others completed a test on the Dewey Mace farm in the Big Injun sand at 1,972 feet. It is a gas well gauging 500,000 feet a day.

In Glenville district, Gilmer County, Wolfe Pen Oil & Gas Co., on the W. J. Radcliff farm, drilled into Big Injun sand to 1,832 feet and has a gas well gauging 250,000 feet a day. In DeKalb district J. W. Cunningham completed a test on the I. C. W. Fling farm at 2,255 feet. Big Injun, 1,870-95 feet; gas gauging 49,000 feet a day before shot at 1,875-85 feet.

In Harrison County, the Hope Natural Gas Co. completed a gas well on the L. H. Coffman farm in Eagle district in Speechley sand at a depth of 2,244 feet. It gauges 297,000 feet a day.

In Lincoln County, Adkins, Morris and others completed deepening No. 2 Creeley Adkins in Union district at 3,495 feet. Brown shale at 3,185-3,480 feet and 82,000 feet of gas at 3,315-3,434 feet.

In Monongalia County, J. I. Eddy & Co. deepened No. 1 O. P. Michael in Clay district through the Thirty-foot sand to 2,538 feet and it is a fair gasser gauging 652,000 feet a day.

In Tyler County, S. J. McIntire completed No. 2 A. Matthews in McElroy district at a depth of 2,332 feet, the Injun sand, and it is a gas well good for 250,000 feet a day along with one-half barrel of oil.

In Wayne County, Jackson & Woodall completed No. 1 P. W. Sansom in Union district at 3,188 feet as a gas well gauging 1,240,000 feet a day. The Big lime was at 1,134-1,409 feet; Big Injun, 1,531-79 feet; Berea, 1,908-15 feet; Brown shale, 2,419-3,188 feet, with the gas at 2,458-3,188 feet. In this district, the Mountaineer Gas Co. completed No. 1 Otto Adkins at 3,210 feet as a gas well gauging 2,607,000 feet a day. The Big Lime was at 1,400-1,545 feet; Big Injun, 1,560-1,670 feet; Berea, 2,180-2,250 feet; Brown shale, 2,250-3,205 feet, with the gas at 2,650-3,215 feet.

Oriskany Field

In the Coopers Creek field in Kanawha County, Everett Starcher is completing the test on the Greenbury Samuels farm in Poca district, having topped the Oriskany sand at 4,834 feet with 497,000 feet of gas showing. The hole is 4,862 feet deep and it will be shot. In Union district west of this field, the Grand View Gas Co. shut down at 4,074 feet in the test on the Grand Memorial Park and has a gas well in the shales gauging 292,000 feet a day.

The test of Godfrey L. Cabot, Inc., on the John T. Bonham farm in Poca district reported as a completion good for 1,500,000 feet a day turned out surprisingly large after shot. It now gauges 12,129,000 feet a day and is west of the entire field.

There were two locations in Poca district for the week. Joe Rubin made a location of the Lawrence Smith farm, 2¼ miles north and 1 mile west of Sissonville. R. E. McCabe made a location on the F. M. Ray, Jr., 1 mile south of the large gas well on the J. E. and M. D. Good farm.

Outside Deep Tests

In Jackson County, the United Carbon Co. is cleaning out cement in No. 1 Elizabeth W. Perkins in Washington County and will run in 7-inch on a packer to take the place of the 8-inch, shutting off the surface water. In the No. 2, same farm, this company is drilling and has reached 5,150 feet or within about 150 feet of the expected depth of the Onondaga.

In Boone County, the Owens Illinois Glass Co. is drilling at 4,537 feet deepening No. 12 Bull Creek Coal & Land Co. tract, in Petonia district. In Roane County, the Ohio Valley Gas Co. is down 4,127 feet on the M. C. Larch and others farm in Harper district.

In Clay County, the Pittsburgh & West Virginia Gas Co. is drilling at 300 feet in the deep test starting on the Jesse Chapman farm in Otter district.

In Wirt County, the Carnegie Natural Gas Co. has reached 1,836 feet in the test on the W. O. Caplinger farm in Tucker district. In Wood County, the Belmont Quadrangle Co. is fishing at 1,725 feet in the test on the C. D. White farm in Steel district.

Brazil Oil Imports

Official figures showing Brazilian imports of crude and refined oils for the year 1936, reveal that approximately 42 per cent of the gasoline imports came from the United States and about 28 per cent from the Dutch West Indies. The United States supplied only 1.2 per cent of the fuel oil imports into Brazil, while the Dutch West Indies supplied over 90 per cent. Imports for the first six months of 1937 were substantially in excess of the 1936 rate.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil Co., No. 2-2 Capitan, Santa Barbara Co.	32- 5-30	2,993	swabbing
Hancock-Bush, No. 2-H Santa Maria, Santa Barbara	30-10-33	3,980	sd. sh. drlg.
Pet. Prop., Inc., No. 1-R Santa Maria, Santa Barbara	19-10-33	723	cmtd. 722
Sed Oil Co., No. 1 Mills, Santa Maria, Santa Barbara	27-10-34	4,422	sd. sh. drlg.
Moore, E. H., No. 2 Sugar, Santa Maria, Santa Barbara	19-10-34	3,695	gr. sh. drlg.
Union Oil, No. 4 Battle, Santa Maria, Santa Barbara	24-10-34	2,709	pump. 100 b.d.
Union Oil, No. 4 Vincent, Santa Maria, Santa Barbara	30-10-33	2,910	sd. sh. drlg.
Union Oil, No. 2 LeRoy, Santa Maria, Santa Barbara	24-10-35	4,790	sd. sh. drlg.
Pac. Western Oil, No. 2 Santa Maria, Santa Barbara	21-10-34	4,000	sd. sh. drlg.
Rice Ranch Oil, No. 4 Orcutt, Santa Barbara Co.	23- 9-34	4,330	P.B. 3,732
101 Oil, No. 1 Pt. Concepcion, Santa Barbara Co.	35- 5-33	3,206	will cmt.
Tide Water A. O., No. 1-L Santa Rita, Santa Barbara	3- 6-33	3,415	sd. sh. drlg.
Hancock Oil, No. 2 Los Alamos, Santa Barbara Co.	6- 7-32	6,174	hd. sh. drlg.
Arnold Oil, No. 2 Los Alamos, Santa Barbara Co.	8- 8-33	6,373	flow. 75 b.d.
Field, O. C., No. 1-S.R., Lompoc, Santa Barbara Co.	11- 7-33	3,000	br. sh. drlg.
United Western Oil, No. 1 Los Olivos, Santa Barbara	15- 7-30	2,008	sd. sh. drlg.
Del Mar Oil, No. 1 Summerland, Santa Barbara Co.	16- 4-26	3,976	sd. sh. drlg.
Pet. Securities, No. 8 Ranch, Shiells, Ventura Co.	3- 3-19	3,478	cmtd. 3,186
Texas Co., No. 133 Shiells, Ventura Co.	4- 3-19	4,128	perf. casing
Texas Co., No. 134 Shiells, Ventura Co.	4- 3-19	947	sd. sh. drlg.
Union Oil, No. 16 Bardsdale, Ventura Co.	12- 3-20	6,270	O.S. drlg.
Texas Co., No. 1 Pierce, Camarillo, Ventura Co.	20- 2-21	4,097	dry; abd.
Richfield Oil, No. 1 McFarland, Camarillo, Ventura	13- 2-21	4,051	hd. sh. drlg.
Condor Oil, No. 1 Sespe, Ventura Co.	6- 4-19	2,093	sd. sh. drlg.
Ivers, H. A., No. 14 Star, Sespe, Ventura Co.	1- 4-20	1,502	cleaning out
Williamson Oil, No. 1 Sespe, Ventura Co.	1- 4-20	312	hd. sd. drlg.
Section 20 Oil, No. 1 Sespe, Ventura Co.	20- 5-19	209	sd. sh. drlg.
Speik Oil, No. 2 Sespe, Ventura Co.	33- 5-19	3,050	sd. sh. drlg.
Colima Oil, No. 2 Sespe, Ventura Co.	25- 5-19	3,400	fishing
Topa Topa Oil, No. 3 Sespe, Ventura Co.	33- 5-19	4,050	cleaning out
Commander Oil, No. 7-F Piru, Ventura Co.	13- 4-19	286	sd. sh. drlg.
Skyline Oil, No. 1-H Hopper Canyon, Ventura Co.	13- 4-18	871	cleaning out
Vai, Giovani, No. 1 Ojai, Ventura Co.	4- 4-21	1,586	hd. sh. drlg.
C. C. M. Oil, No. 2 Padre Canyon, Ventura Co.	23- 3-24	7,480	fish. D.P.
Continental Oil, No. 4 Padre Canyon, Ventura Co.	15- 3-24	2,196	sd. sh. drlg.
C. C. M. Oil, No. 16 Rincon, Ventura Co.	8- 3-24	4,230	sd. sh. drlg.
C. C. M. Oil, No. 17 Rincon, Ventura Co.	17- 3-24	1,983	sd. sh. drlg.
Oxnard Oil, No. 1 Oxnard, Ventura Co.	10- 1-22	6,090	O.S. drlg.
Rowe, W. G., No. 1 Johnson, Oxnard, Ventura Co.	15- 1-22	1,992	sd. sh. drlg.
Vaca Oil, No. 2 Oxnard, Ventura Co.	6- 1-21	4,050	hd. sh. drlg.
Tide Water A. O., No. 28 V.L.W., Ventura, Ventura	26- 3-23	6,798	sd. sh. drlg.
Tide Water A. O., No. 30 Lloyd, Ventura, Ventura	27- 3-23	4,964	sd. sh. drlg.
Tide Water A. O., No. 61 Lloyd, Ventura, Ventura	27- 3-23	6,985	sd. sh. drlg.
Tide Water A. O., No. 62 Lloyd, Ventura, Ventura	27- 3-23	6,080	sd. sh. drlg.
Tide Water A. O., No. 137 Lloyd, Ventura, Ventura	27- 3-23	9,913	O.S. drlg.
Tide Water A. O., No. 18 Hartman, Ventura, Ventura	22- 3-23	6,770	sd. sh. drlg.
Shell Oil, No. 35 Gosnell, Ventura Avenue, Ventura	20- 3-23	9,366	deepening
Shell Oil, No. 90 Taylor, Ventura Avenue, Ventura	30- 3-23	6,786	O.S. drlg.
General Pet., No. 17 Barnard, Ventura, Ventura Co.	23- 3-23	8,176	redrlg. 7,983
General Pet., No. 13 Notten, Ventura, Ventura Co.	28- 3-23	9,484	redrlg. 7,745
Den Petroleum, No. 1 Devils Den, Kern Co.	20-25-19	4,722	br. sh. drlg.
Goodrum, George, No. 1 Devils Den, Kern Co.	24-25-18	300	dry; abd.
Tide Water A. O., No. 10-E-3 Lost Hills, Kern Co.	3-26-20	2,043	sd. sh. drlg.
Standard Oil, No. 4 United, Lost Hills, Kern Co.	2-26-20	1,296	rig. to pump
Standard Oil, No. 5 United, Lost Hills, Kern Co.	2-26-20	1,162	sd. sh. drlg.
Argo Pet., No. 1-F Lost Hills, Kern Co.	11-26-20	1,294	pump. 100 b.d.
Birch-Ranch Oil, No. 1 Lovett, McKittrick, Kern Co.	10-30-21	3,697	br. sh. drlg.
Standard Oil, No. 2 Randolph, Semi-Tropic, Kern Co.	14-27-23	1,974	sd. sh. drlg.
Continental Oil, No. 2 Wasco, Kern Co.	8-27-24	10,936	br. sh. drlg.
Belridge Oil, No. 43-26 North Belridge, Kern Co.	26-27-20	5,982	br. sh. drlg.
Belridge Oil, No. 53-26 North Belridge, Kern Co.	26-27-20	6,773	br. sh. drlg.
Belridge Oil, No. 61-26 North Belridge, Kern Co.	26-27-20	8,040	cmtd. 8,040
Belridge Oil, No. 28-1 North Belridge, Kern Co.	1-28-20	7,797	br. sh. drlg.
Texas Co., No. 1 Martin, North Belridge, Kern Co.	22-27-20	8,096	br. sh. drlg.
General Pet., No. 1 St. Helens, Belridge, Kern Co.	12-28-20	304	sd. sh. drlg.
Eastmont Oil, No. 4 Olcese, Round Mountain, Kern	16-28-29	1,750	O.S. drlg.
Shell Oil, No. 15 Freeman, Round Mountain, Kern	20-28-29	1,860	completing
Honolulu Oil, No. 15 Round Mountain, Kern Co.	20-28-29	1,858	O.S. drlg.
Honolulu Oil, No. 25 Round Mountain, Kern Co.	18-28-29	1,915	milling
Honolulu Oil, No. 43 Round Mountain, Kern Co.	18-28-29	1,475	sd. sh. drlg.
Tampico Pet., No. 3 Round Mountain, Kern Co.	17-28-29	1,097	sd. sh. drlg.
Cal-Western Oil, No. 5 C.C., Round Mountain, Kern	12-28-28	1,958	O.S. drlg.
McDonald, H. A., No. 1 Larkin, Round Mountain, Kern	12-28-28	1,951	O.S. drlg.
Oils, Inc.; of California, No. 7-2 Kern Front, Kern Co.	13-28-27	1,135	pump. water
Malone, F. H., No. 3 Mabry, Kern Front, Kern Co.	4-28-27	2,048	sd. sh. drlg.
Tide Water A. O., No. 8 Wilcox, Kern Front, Kern Co.	4-28-27	2,785	sd. sh. drlg.
California Star Oil, No. 3-80 Kern Front, Kern Co.	22-28-27	496	sd. sh. drlg.
Texas Co., No. 9 Lehman, Kern Front, Kern Co.	23-28-27	2,065	bailing
Well Developers, Inc., No. 1 Kern River, Kern Co.	16-28-28	3,187	sd. sh. drlg.
Fuhrman, A., No. 10 Kern River, Kern Co.	28-28-28	620	rig. to pump
Sleeper Ridge Oil, No. 1 Kern River, Kern Co.	15-29-28	532	sd. sh. drlg.
Vedder, D. G., No. 1 B.N.D., Mount Poso, Kern Co.	32-26-28	1,691	rig. to pump
Trico O. & G., No. 1 Modoc, Mount Poso, Kern Co.	20-26-28	1,870	dry; abd.
Ring Oil, No. 2 Blackfoot, Mount Poso, Kern Co.	32-26-28	1,810	O.S. drlg.
Vedder Pet., No. 29-1 Lambert, Mount Poso, Kern Co.	29-26-28	1,795	pump. 226 b.d.
Vedder Pet., No. 29-2 Lambert, Mount Poso, Kern Co.	29-26-28	1,807	rig. to pump
Pacific O. & G., No. 1 Davidson, Mount Poso, Kern Co.	36-27-27	2,849	form. test
Framac Oil, No. 1 Brown, Mount Poso, Kern Co.	22-27-27	1,351	fish. D.P.
Desert Glow Oil, No. 2 Mount Poso, Kern Co.	14-27-27	1,232	O.S. drlg.
Union Oil, No. 12 Tribe, Mount Poso, Kern Co.	28-27-28	1,855	pump. 541 b.d.
Union Oil, No. 2-B Tribe, Mount Poso, Kern Co.	28-27-28	129	sd. sh. drlg.
Western Gulf Oil, No. 8 Red Ribbon, Fruitvale, Kern	27-29-27	3,456	O.S. drlg.
Western Gulf Oil, No. 27 K.C.L., Fruitvale, Kern Co.	22-29-27	3,898	flow. 135 b.d.
Sandy Oil, No. 2 Fruitvale, Kern Co.	26-29-27	3,590	P.B. 3,497
Section Six Oil, No. 1 Mountain View, Kern Co.	6-31-29	5,120	sd. sh. drlg.
Ohio Oil, No. 6 Derby, Mountain View, Kern Co.	33-30-29	2,791	sd. sh. drlg.
Barnsdall Oil, No. 2-N Mountain View, Kern Co.	19-30-29	4,841	cleaning out
Hogan Pet., No. 4 Symons, Mountain View, Kern Co.	4-31-29	6,557	rig. to pump
Hogan Pet., No. 5 Symons, Mountain View, Kern Co.	4-31-29	2,163	sd. sh. drlg.
Hogan Pet., No. 3 Peters, Mountain View, Kern Co.	5-31-29	5,212	rig. to pump
Hogan Pet., No. 9 Wharton, Mountain View, Kern Co.	32-30-29	5,271	O.S. drlg.
Greer, P. H., No. 1 Perrel, Mountain View, Kern Co.	9-31-29	5,502	flow. 503 b.d.
General Pet., No. 2 Freeport, Mountain View, Kern	19-30-29	4,760	O.S. drlg.
Berree Oil, No. 6 Seale, Edison, Kern Co.	5-30-29	2,315	deepening
Monterey Expl., No. 7 Duff, Edison, Kern Co.	15-30-29	1,929	P.B. 1870
Wood-Callahan Oil, No. 1 Harvey, Edison, Kern Co.	21-30-29	1,940	sd. sh. drlg.
General Pet., No. 1 Houchin, Arvin, Kern Co.	27-31-29	6,575	sd. sh. drlg.
Arkelo Oil, No. 1 Lerdo, Kern Co.	23-28-26	10,050	redrlg. 8,000
Union Oil, No. 1-34 Rio Bravo, Kern Co.	34-28-25	10,754	sd. sh. drlg.
Continental Oil, No. 1 Rosedale, Kern Co.	12-29-26	10,210	sidetrk. 6,785
Superior Oil, No. 9 KCL, Greeley, Kern Co.	3-30-26	7,241	br. sh. drlg.
Standard Oil, No. 11-8 KCL, Greeley, Kern Co.	18-29-26	7,426	fish. D.P.
Standard Oil, No. 11-9 KCL, Greeley, Kern Co.	20-29-26	1,694	sd. sh. drlg.
Standard Oil, No. 12-2 KCL, Greeley, Kern Co.	16-29-26	7,597	sd. sh. drlg.
Standard Oil, No. 1-F Greeley, Kern Co.	20-29-26	4,996	sd. sh. drlg.
Shell Oil, No. 4-30 Ten Section, Kern Co.	33-30-26	8,236	swabbing
Shell Oil, No. 8-28-A Ten Section, Kern Co.	28-30-26	982	sd. sh. drlg.
Shell Oil, No. 61-31-B Ten Section, Kern Co.	30-30-26	7,771	br. sh. drlg.
Ohio Oil, No. 3-E, K.C.L., Ten Section, Kern Co.	14-30-25	1,926	sd. sh. drlg.
Merritt Annex Oil, No. 6 Midway-Sunset, Kern Co.	25-12-24	2,718	sd. sh. drlg.
C. C. M. Oil, No. 25-21 Midway-Sunset, Kern Co.	21-32-23	2,730	pump. 125 b.d.
C. C. M. Oil, No. 43-21 Midway-Sunset, Kern Co.	21-32-23	2,716	tested wet
C. C. M. Oil, No. 45-21 Midway-Sunset, Kern Co.	21-32-23	1,429	sd. sh. drlg.
C. C. M. Oil, No. 1-U.S., Midway-Sunset, Kern Co.	30-32-24	2,830	br. sh. drlg.
Hallmark Oil, No. 7 Midway-Sunset, Kern Co.	25-12-24	2,992	O.S. drlg.
Richfield Oil, No. 13 Fellows, Midway-Sunset, Kern	6-32-23	1,390	sd. sh. drlg.
Wreden Pet., No. 1 Midway-Sunset, Kern Co.	12-11-24	1,530	sd. sh. drlg.
Standard Oil, No. 37-23-D Midway-Sunset, Kern Co.	23-32-24	3,413	completing
National Oil, No. 30 Midway-Sunset, Kern Co.	35-32-23	314	sd. sh. drlg.
Texas Co., No. 1 Pioneer, Midway-Sunset, Kern Co.	33-11-23	2,798	sd. sh. drlg.
Texas Co., No. 24 Midway-Sunset, Kern Co.	32-32-24	3,155	pump. 201 b.d.
Texas Co., No. 25 Midway-Sunset, Kern Co.	32-32-24	2,291	sd. sh. drlg.
U. S. Pumping Equip., No. 2 Midway-Sunset, Kern	12-11-24	1,365	sd. sh. drlg.
Richfield Oil, No. 1-A Buena, Elk Hills, Kern Co.	7-31-25	3,700	dry; abd.
Reserve Oil & Gas, No. 33-4 Tejon, Kern Co.	33-11-19	4,607	idle
Seaboard Oil, No. 1 Firebaugh, Madera Co.	27-12-25	5,291	sd. sh. drlg.
K. N. D. A., No. 4-18-J Kettleman North, Fresno Co.	18-21-17	11,191	gr. sd. drlg.
K. N. D. A., No. 43-34-J Kettleman North, Fresno Co.	34-21-17	2,153	sd. sh. drlg.
K. N. D. A., No. 41-4-P Kettleman North, Fresno Co.	4-22-17	7,760	gr. sd. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., plugging big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shutoff O.K.
W.S.O.N.G., water shut off no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

K. N. D. A., No. 83-4-P Kettleman North, Fresno Co.	4-22-17	6,751	fish. D.P.
K. N. D. A., No. 27-12-P Kettleman North, Kings Co.	12-22-17	5,296	br. sh. drlg.
K. N. D. A., No. 6-6-Q Kettleman North, Kings Co.	6-22-18	6,751	br. sh. drlg.
K. N. D. A., No. 27-6-Q Kettleman North, Kings Co.	6-22-18	6,094	sd. sh. drlg.
Standard Oil, No. 27-33-J Kettleman North, Fresno	33-21-17	7,010	br. sh. drlg.
Standard Oil, No. 2-11-P Kettleman North, Kings Co.	11-22-17	5,651	sd. sh. drlg.
Standard Oil, No. 76-1-P Kettleman North, Kings Co.	1-22-17	2,972	sd. sh. drlg.
Superior Oil, No. 1 Huffman, Kettleman No., Fresno	29-21-17	8,901	sd. sh. drlg.
Temblor Oil, No. 1-B Kettleman Middle, Kings Co.	25-23-18	8,256	O.S. drlg.
Dudley Ridge Dev., No. 1 Tulare Lake, Kings Co.	24-23-20	3,862	cmtd.
Burkholder Oil, No. 1 Panorama, San Luis Obispo Co.	14-10-26	4,035	rig burned
Hancock Oil, No. 1 Huasna, San Luis Obispo Co.	30-12-33	2,164	sd. sh. drlg.
Lewis, A. O., No. 1 Pecho, Huasna, San Luis Obispo	34-30-10	2,772	flow. water
Elba Oil, No. 1 Pajaro, Monterey Co.	6-13-2	3,970	cmtd. 3,871
Anderson, Amil, No. 1 Cholame, Monterey Co.	15-24-14	2,640	br. sh. drlg.
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	5,480	shut in
Standard Oil, No. 1 Delano, Tulare Co.	36-24-23	8,164	sd. sh. drlg.
Magnet O. & G., No. 1 Delano, Tulare Co.	29-24-24	6,465	sd. sh. drlg.
Tulare Dome Oil, No. 1 Allensworth, Tulare Co.	17-21-23	3,125	will redri.
Jennings, E. P., No. 2 Allensworth, Tulare Co.	33-23-23	2,765	idle
Standard Oil, No. 1 Hooper, Woodland, Yolo Co.	32- 9-1	3,876	redrlg. 3,799
Empire O. & G., No. 1 Woodland, Yolo Co.	8- 9-3	231	sd. sh. drlg.
Wilshire Oil, No. 1 Half Moon Bay, San Mateo Co.	20- 6-5	1,266	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Richfield Oil, No. 1 Howard, Los Angeles Co.	7- 3-14	5,785	sd. sh. drlg.
Richfield Oil, No. 1-SF El Segundo, Los Angeles Co.	18- 3-14	7,690	P.B. 7,615
Richfield Oil, No. 2 Elsie, El Segundo, Los Angeles	12- 3-15	7,050	Schist; drlg.
Union Oil, No. 3 El Segundo, Los Angeles Co.	18- 3-14	7,480	will cmt.
Sunshine Oil, No. 1 El Segundo, Los Angeles Co.	12- 3-15	7,100	sd. sh. drlg.
Tide Water A. O., No. 1 El Segundo, Los Angeles Co.	8- 3-14	4,784	sd. sh. drlg.
Ohio Oil, No. 7 Gough, El Segundo, Los Angeles Co.	7- 3-14	7,092	Schist
Texas Co., No. 3 Security, El Segundo, Los Angeles	18- 3-14	7,162	flow. 435 b.d.
Standard Oil, No. 2 Refinery, El Segundo, Los Angeles	13- 3-15	7,100	sd. sh. drlg.
Standard Oil, No. 3 Refinery, El Segundo, Los Angeles	13- 3-15	7,074	sd. sh. drlg.
Pacific Western Oil, No. 1 El Segundo, Los Angeles	7- 3-14	6,849	fish. D.P.
Getty Oil, No. 1 El Segundo, Los Angeles Co.	7- 3-14	7,119	blew out; abd.
Douglas Oil, No. 9 Peck, Lawndale, Los Angeles Co.	20- 3-14	7,270	flow. salt wtr.
Young & Bryan, No. 1 Peck, Lawndale, Los Angeles	20- 3-14	7,247	flow. salt wtr.
Standard Oil, No. 84 L.A.I., Inglewood, Los Angeles	17- 2-14	1,455	cmtd. 1,455
B. C. L. Oil, No. 1 Torrance, Los Angeles Co.	5- 4-14	3,260	cmtd. 3,162
C. C. M. Oil, No. 34-T Torrance, Los Angeles Co.	16- 4-14	4,922	O.S. drlg.
Loma Verde Oil, No. 12 Torrance, Los Angeles Co.	16- 4-14	4,981	P.B. 4,873
Kavanaugh, E. C., No. 1 Palos Verdes, Los Angeles	17- 4-14	4,120	sd. sh. drlg.
Tide Water A. O., No. 4 Cypress, Potrero, Los Angeles	34- 2-14	3,708	sd. sh. drlg.
Shell Oil, No. 92 Reyes, Dominguez, Los Angeles Co.	33- 3-13	5,820	sd. sh. drlg.
Shell Oil, No. 49 Reyes, Dominguez, Los Angeles Co.	33- 3-13	5,327	cleaning out
Union Oil, No. 56 Callender, Dominguez, Los Angeles	33- 3-13	7,321	reaming
Union Oil, No. 57 Callender, Dominguez, Los Angeles	33- 3-13	2,293	sd. sh. drlg.
Union Oil, No. 45 Heilman, Dominguez, Los Angeles	33- 3-13	2,164	sd. sh. drlg.
Union Oil, No. 47 Heilman, Dominguez, Los Angeles	33- 3-13	6,700	flow. 198 b.d.
Barnsdall Oil, No. 16 O'Dea, Rosecrans, Los Angeles	18- 3-13	7,881	P.B. 6,741
Union Oil, No. 35-H.P., Rosecrans, Los Angeles Co.	18- 3-13	243	sd. sh. drlg.
Union Oil, No. 17 Rosecrans, Los Angeles Co.	18- 3-13	5,440	sd. sh. drlg.
Macrate, A. N., No. 2 Rosecrans, Los Angeles Co.	17- 3-13	7,747	redrlg. 7,477
Bolsa Chica Oil, No. 1 Rosecrans, Los Angeles Co.	20- 3-13	7,944	P.B. 7,270
Sharby Oil, No. 1 Playa Del Rey, Los Angeles Co.	22- 2-15	7,524	tested wet
Burt, A. G., No. 1 Newhall, Los Angeles Co.	36- 4-17	2,077	idle
Barnsdall Oil, No. 2-S.F., Newhall, Los Angeles Co.	26- 4-17	5,084	fish. D.P.
Holbrook Pet., No. 1 Newhall, Los Angeles Co.	28- 4-16	6,250	P.B. 5,700
General Pet., No. 12 Ford, Wilmington, Los Angeles	4- 5-13	3,536	sd. sh. drlg.
General Pet., No. 17 Ford, Wilmington, Los Angeles	4- 5-13	5,091	sd. sh. drlg.
General Pet., No. 22 Ford, Wilmington, Los Angeles	4- 5-13	2,297	sd. sh. drlg.
General Pet., No. 23 Ford, Wilmington, Los Angeles	4- 5-13	2,951	flow. 201 b.d.
General Pet., No. 4 Isco, Wilmington, Los Angeles	4- 5-13	2,618	sd. sh. drlg.
Bankline Oil, No. 10-P.T., Wilmington, Los Angeles	34- 4-13	2,860	sd. sh. drlg.
Bankline Oil, No. 25-D.H., Wilmington, Los Angeles	34- 4-13	2,593	sd. sh. drlg.
Bankline Oil, No. 3-C.Y., Wilmington, Los Angeles	34- 4-13	3,215	sd. sh. drlg.
Black Gold Oil, No. 4-B Wilmington, Los Angeles Co.	32- 4-13	3,583	sd. sh. drlg.
Caminol Oil, No. 1-P Wilmington, Los Angeles Co.	33- 4-13	2,376	sd. sh. drlg.
Exeter Oil, No. 1 Banning, Wilmington, Los Angeles	32- 4-13	3,609	sd. sh. drlg.
Macmillan Pet., No. 7-H Wilmington, Los Angeles Co.	32- 4-13	2,797	sd. sh. drlg.
McDonald & Burns, No. 1 Wilmington, Los Angeles	32- 4-13	3,620	flow. 470 b.d.
O'Dell & Dunlap, No. 1 Wilmington, Los Angeles Co.	33- 4-13	3,515	sd. sh. drlg.
Pac. Western, No. 1 Weldt, Wilmington, Los Angeles	33- 4-13	2,925	flow. 321 b.d.
Pongratz, No. 2 Banning, Wilmington, Los Angeles	33- 4-13	3,115	sd. sh. drlg.
Ring Oil, No. 5 Wilmington, Los Angeles Co.	33- 4-13	2,690	idle
Royalty Serv., No. 842-2 Wilmington, Los Angeles	33- 4-13	5,380	water witch
Texas Co., No. 1 Refinery, Wilmington, Los Angeles	34- 4-13	3,500	completing
Union Pacific, No. 22 Wilmington, Los Angeles Co.	34- 4-13	3,375	sd. sh. drlg.
Union Pacific, No. 37 Wilmington, Los Angeles Co.	33- 4-13	3,577	P.B. 3,453
Union Pacific, No. 38 Wilmington, Los Angeles Co.	34- 4-13	1,994	sd. sh. drlg.
Union Pacific, No. 40 Wilmington, Los Angeles Co.	33- 4-13	2,197	sd. sh. drlg.
Union Pacific, No. 41 Wilmington, Los Angeles Co.	34- 4-13	2,881	sd. sh. drlg.
Union Pacific, No. 55 Wilmington, Los Angeles Co.	4- 5-13	2,243	sd. sh. drlg.
Union Pacific, No. 57 Wilmington, Los Angeles Co.	4- 5-13	2,655	sd. sh. drlg.
Union Pacific, No. 58 Wilmington, Los Angeles Co.	4- 5-13	3,080	flow. 970 b.d.
Union Pacific, No. 4-C Wilmington, Los Angeles Co.	33- 4-13	2,956	sd. sh. drlg.
Camroo Oil, No. 1 Sterns, Pomona, Los Angeles Co.	33- 1-9	1,227	sd. sh. drlg.
Julian, C. A., No. 1 Koch, Walnut, Los Angeles Co.	5- 2-9	2,606	gr. sd. drlg.
Hillidon Oil, No. 2 Bixby, Flood Control, Los Angeles	13- 4-13	4,135	flow. 750 b.d.
Texas Co., No. 3 Flower, Long Beach, Los Angeles	19- 4-12	4,843	bailing
Richfield Oil, No. 10 Denni, Long Beach, Los Angeles	19- 4-12	4,976	bailing
Richfield Oil, No. 4 Keon, Long Beach, Los Angeles	19- 4-12	1,492	sd. sh. drlg.
Clayton, G. L., No. 1 North Long Beach, Los Angeles	32- 3-12	5,728	idle
Union Oil, No. 100 Santa Fe Springs, Los Angeles	6- 3-11	10,789	fish. D.P.
Texas Co., No. 7-W Santa Fe Springs, Los Angeles	6- 3-11	6,470	fish. D.P.
Continental Oil, No. 40 Bixby, Seal Beach, Orange Co.	2- 5-12	4,608	recmtd. 4,603
Wilshire Oil, No. 6-B Huntington, Orange Co.	10- 6-11	5,375	rig. to pump
Standard Oil, No. 15 Thomson, Huntington, Orange	12- 6-11	3,820	sd. sh. drlg.
Johnston Drlg., No. 1 Sunset Beach, Orange Co.	20- 5-11	6,159	br. sh. drlg.
Shell Oil, No. 4-1 Columbia, Olinda, Orange Co.	9- 3-9	5,093	pump. O. & W.
Brea Canyon Oil, No. 36 Brea Canyon, Orange Co.	2- 3-10	4,000	redrlg. 3,591
Standard Oil, No. 127 Murphy, West Coyote, Orange	18- 3-10	1,798	sd. sh. drlg.
Bartholomae Oil, No. 5 East Coyote, Orange Co.	22- 3-10	4,700	hd. sd. drlg.
Dolicia Oil, No. 3 A.U.W., East Coyote, Orange Co.	24- 3-10	4,089	cleaning out
Tide Water A. O., No. 42 East Coyote, Orange Co.	22- 3-10	3,650	rig. to pump
Standard Oil, No. 2-16 Kraemer, Richfield, Orange Co.	29- 3-9	4,740	pump. 48 b.d.
Arrowhead Oil, No. 2 Bradford, Richfield, Orange Co.	32- 3-9	4,130	deepening
Union Oil Co., No. 29 Chapman, Richfield, Orange Co.	30- 3-9	8,610	cmtd. 7,614
Hjorth & Mohr, No. 1 Yorba, Orange Co.	22- 3-9	1,359	hd. sd. drlg.
Beverly Hills Pet., No. 1 Fricke, Yorba, Orange Co.	21- 3-9	1,597	hd. sd. drlg.
Mid-State Pet., No. 1 Oliver, Yorba, Orange Co.	22- 3-9	1,742	O.S., drlg.
West American Oil, No. 1 Tustin, Orange Co.	14- 5-9	6,070	redrlg. 4,680
Shell Oil, No. 1-H Anaheim, Orange Co.	9- 4-10	6,198	sd. sh. drlg.

KANSAS

Week Ending September 25 (Descriptions are East unless marked otherwise)

Barber County

Helmerich & Payne et al No. 1 Blunk Est., C SE sec. 18-34-13w. Drlg. 4,155 ft.

Olson Oil Co. and Skelly Oil Co. No. 1 Elsea, SW SE NW sec. 27-32-14w. Viola 4,966-68½ ft.; fsg.

W. I. Southern, Inc., No. 1 Davis, SE SE NE sec. 24-34-15w. T.D. 5,375 ft.; shot; bailing.

Barton County

Armer & Vernon Oil & Gas Co. No. 1 Persons, SW SW SE sec. 7-17-13w. U.R. 8-in. 2,835 ft.

Brouk and National Ref. Co. No. 1 Gory, NW SW sec. 10-17-13w. Drlg. 1,895 ft.

C. L. Price No. 1 Hammeke, NE NE SW sec. 12-18-12w. Sil. 3,415-27 ft.; 1,800 ft. O.I.H.

Shell Pet. Corp. No. 1 Peterman, SE NE SE sec. 13-16-14w. Sil. 3,341-44 ft.; sat.; to core.

Vickers Pet. Co. No. 1 Lucas, NW NW NE sec. 16-17-14w. H.F.W. 3,470-82 ft.; D.&A.

Ralph Wixson et al No. 1 Buhrle, SE SE NE sec. 14-16-13w. S.D. 3,175 ft.

Butler County

Rex & Morris et al No. 1 Stephens, SW SW SE sec. 35-23-3e. H.F.W. 2,692-96 ft., T.D.

Chautauqua County

C. L. Brosius et al No. 1 Garrett, NW SW NW sec. 26-32-11. H.F.W. 2,076 ft., T.D.; P.B. 1,545 ft.; C.O.

W. G. Buffington No. 1 Fisher, CWL SW NW sec. 10-34-9e. S.D. 1,050 ft.

C. R. Craft No. 1 Lagree, SE NW NE sec. 8-32-12e. T.D. 2,080 ft.; P.B. 687 ft.

Harrison No. 1 Brown, NE SE NE sec. 19-34-10. S.D. 510 ft.

S. H. Vineard No. 1 Hughes, NE NE SE sec. 13-32-12. S.D. 426 ft.

Cowley County

Arthur Brewer No. 1 Starkey, SW NE sec. 16-30-4. Drlg. 2,350 ft.

Pryor & Lockhart No. 1 Brown, NE SE SE sec. 34-33-3e. Drlg. 3,285 ft.

Edwards County

Douglas & Gear et al No. 1 Meade, SE SE NW sec. 33-25-16w. Sil. 4,768-98 ft.; D.&A.

Ellis County

Aylward Prod. Co. et al No. 1 Berens, SE SE sec. 10-14-16w. Spd.

Brunson Drlg. Co. et al No. 1 Weisner, SE SW SE sec. 31-13-17w. T.D. 3,590 ft.; S.O.

Buffalo Oil Co. No. 1 Phillip, NE NE sec. 18-14-16w. H.F.W. 3,455-60 ft.; P.B.

Colonial Oil Co. and Bernheimer No. 1 Albert, SW SW NE sec. 31-12-18w. Fsg. 1,260 ft.

Lario O. & R. Co. No. 1 Bell, NW NW NE sec. 8-12-18w. Drlg. 2,550 ft.

L. M. Reynolds No. 1 Polcyn, SE SE NE sec. 24-13-16w. Drlg. 2,980 ft.

P. G. Reynolds et al No. 1 Karlin, NW cor. sec. 13-12-18w. U.R. 8-in. 2,565 ft.

C. E. W. Skiles et al No. 1 Jensen, SW SE NE sec. 26-12-18w. Drlg. 2,902 ft.

Earl Wakefield et al No. 1 Burnett, NW NW NE sec. 1-11-18. U.R. 6-in. 3,359 ft.

Ellsworth County

Equity Gas Co. No. 1 Razac, NE NE SE sec. 31-15-10w. H.F.W. 3,265-70 ft.; D. &A.

Hinkle et al No. 1 Alden, SE SE SW sec 17-17-10w. Anhy. 585 ft.

Greenwood County

Eagle Oil Co. No. 1 Stine, NE NE SE sec. 13-28-10. Drlg. 250 ft.

Ward McGinnis et al No. 1 Henly Estate SW cor. sec. 25-25-9. T.D. 2,234 ft.; H F.W.; P.B.; cmt. 6-in.

Ward McGinnis et al No. 1 Smith & Jobes, NW NW SE sec. 10-24-13e. T.D. 1,633 ft.; D.&A.

S. Van Devanter et al No. 1 Dove, NE SE SW sec. 12-28-11. T.D. 650 ft.; skd. rig.

Jackson County

Lemmick Oil Co. No. 1 Marble Savings Bank, NE cor. sec. 26-9-14. Spd. and S.D.

Kearny County

J. L. Murphy No. 1 Masonic Home, C NW sec. 1-26-36w. S.D. 1,468 ft.

Kingman County

Carter Oil Co. No 1 Davis, C E½ NE NE sec. 24-28-8w. Miss. L. 4,075 ft.; cg.

Logan County

Morgan, Flynn, Cobb et al No. 1 McMillen, C NW sec. 9-13-37w. S.D. 3,489 ft. for repairs.

Lyon County

Arthur Sory No. 1 Byrd, SW SW SE sec. 32-21-11. T.D. 1,914 ft.; pmpd. 25 B.O. and 25 B.W. daily; comp.

Marion County

Western Kansas O. & R. Co. et al No. 1 Suderman, SE SW NW sec. 22-20-2e. Drlg. 3,100 ft.

McPherson County

C. E. Ash Drlg. Co. No. 1 Broman, NE NE NW sec. 19-17-4w. Drlg. 2,635 ft.

H. C. Becker No. 1 Mason, SW NE sec. 9-17-1w. Drlg. 2,208 ft.

Bradley Bros. No. 1 Barnholt, SW SW SE sec. 30-20-5w. Chat 3,292 ft.; T.D. 3,335 ft.; P. 115 B.O. in 14 hrs.; down 5 hrs.

Fred C. Frank et al No. 1 Doles, SE NW NE sec. 12-19-1w. Set 8-in. 2,775 ft.; S.D.

Wamhoff et al No. 1 Nuse, SE NE SW sec. 18-18-4w. S.D. 1,850 ft.

Meade County

Pacific Mid-West Co. No. 1 Rexford, NE SE SW sec. 8-30-29w. Drlg. 900 ft.

Mitchell County

Geo. Siedhoff et al No. 1 Greiss, SW SW SE sec. 16-8-10w. S.D. 4,022 ft.

Ness County

Trojan O. & G. Co. No. 1 Page Milling Co., SE SE NW sec. 36-18-26w. Drlg. 2,700 ft.

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Inc. oil 4,400-02 ft.; 3,500 ft. O.I.H. at 4,406 ft.; S.D.

Osborne County

Fred C. Chaddox and Atlantic Ref. Co No. 1 Slater, NE SW NE sec. 33-10-15w. U.R. 8-in. 2,880 ft.

F. E. Fullerton & Son No. 1 Moray, NE SE SW sec. 27-10-12w. S.D. 500 ft.

Phillips County

C. W. Davidson et al No. 1 Elliff, SE NE NE sec. 35-5-18w. S.D. 350 ft.

Pratt County

Atlantic Ref. Co. et al No. 1 Runyon, SW NW NE sec. 11-27-13w. T.D. 4,437 ft.; P.B. 4,300 ft.; shot; C.O.

Skelly Oil Co. et al No. 1 Adams, SE NW NE sec. 2-28-11w. Rng. 6-in. 3,957 ft.

Stanolind O. & G. Co. No. 1 Hartsell, NW SW sec. 14-26-12w. Drlg. 3,100 ft.

Reno County

Lib Phillips et al No. 1 McPheeters, NE NE NW sec. 22-26-8w. Spd. and S.D.

Sam Schneider et al No. 1 Kroecker, NE cor. sec. 12-22-5w. Fsg. 2,435 ft.

Rice County

Bell O. & G. Co. et al No. 1 Wilkins, NW NW NE sec. 23-21-9w. Simp. 3,591 ft.; Sil. 3,643 ft.; T.D. 3,662 ft.

Boyle & Grossman No. 1 Diener, SE NE sec. 35-19-1w. Drlg. 1,150 ft.

Gerbrand-Puise Oil & Drilling Co. No. 1 Wellman, SW cor. sec. 22-21-9w. U.R. 8-in. 2,785 ft.

Gillespie et al No. 1 Strong, NE NW sec. 9-18-8w. Spd. and S.D.

John Hanna et al No. 1 Marshall, NE NW NW sec. 30-18s-8w. S.D. 1,515 ft.

Skiles et al No. 1 Campbell, SE SE NE sec. 28-19-9w. Pay 2,950-56 ft., T.D.; 2,000 ft. O.I.H. in 3 hrs.

E. Witt et al No. 1 Fair, NW SE SE sec. 4-22-8w. Fsg. 4,245 ft.

Rooks County

C. R. Craft et al No. 1 Ziegler, NE SW sec. 8-10-16w. Drlg. 3,005 ft.

Graham et al No. 1 Fike, SW cor. sec. 9-9-17w. T.D. 3,326 ft.; pmpd. 50 B.O. and 35 B.W. in 8 hrs.

J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. C.O. 3,875 ft.

Rush County

Duwe & Brouk No. 1 Lebsack, SE SE NE sec. 13-16-16w. Sil. 3,492-95 ft.; 1,500 ft. sulfur water in hole in 2½ hrs.; T.D. 3,512 ft.; S.D.O.

Earl Wakefield et al No. 1 Zimmerman, SE SE SW sec. 7-16-18w. S.D. 3,105 ft.

Wakefield & Brouk No. 1 Kerbs, NW NW SE sec. 11-17-16w. Spd. and S.D.

Russell County

Cities Service Oil Co. et al No. 1 Eichman, SW SE sec. 12-15-14w. Drlg. 2,477 ft.

Cities Service Oil Co. and Texas Co. No. 1 Boxberger B. NE cor. sec. 23-13-15w. Set 8-in. 3,025 ft.; C.O.

Emrichs et al No. 1 Anderson, NE SE SW sec. 33-15-11w. Spd. and S.D.

Murfin and Vernon O. & G. Co. No. 1 Pearson, NE cor. sec. 31-15-15w. Spd. and S.D.

Parks No. 1 Opdycks, SW cor. sec. 20-14-13w. S.D. 260 ft.

Phil-Han Oil Co. No. 1 Deines, NE NE NW sec. 33-14-14w. Drlg. 255 ft.

Trapp Drlg. Co. et al No. 1 Polcyn, NE SE sec. 34-14-15w. Drlg. 2,035 ft.

Winkler & Koch No. 1 Jones, SE SE NW sec. 22-14-13w. Sil. 3,180 ft.; S.D.O.

Sedgwick County

Fulton et al No. 1 fee, NE SE sec. 35-28-1e. T.D. 765 ft.; U.R. 8-in.

McKnab No. 1 Garrett, SE SW SW sec. 18-29-2e. Drlg. 80 ft.

I. W. Murfin et al No. 1 Martin, SE NW sec. 32-28-1e. Drlg. 1,975 ft.

National Ref. Co. No. 1 fee, SE NE SE sec. 26-27-2e. Drlg. 1,315 ft.

Palmer Oil Corp. No. 1 Royal, NE cor. sec. 15-28-1w. T.D. 3,899 ft.; S.D.O.

W. G. Talbott et al No. 1 Downs Est., SE SE NW sec. 32-28-2e. T.D. 2,232 ft.; 3,922,000 ft. gas.

Union O. & R. Co. et al No. 1 Howell, SW cor. sec. 6-29-1e. Drlg. 1,830 ft.

Stafford County

W. P. Faulkner No. 1 Moses, NW SW sec. 9-22-13w. Fsg. 915 ft.

Kessler et al No. 1 Jenkins, SE NE sec. 15-25-12w. Drlg. 3,967 ft.
Fred P. Rust et al No. 1 Johnson, NW SW sec. 29-25-12w. Drlg. 2,920 ft.
E. J. Shaffer No. 1 Spencer, NW SW sec. 3-25-14w. T.D. 4,344 ft.; D.&A.

Sumner County

Cities Service Oil Co. No. 1 McCoy, SE SW sec. 11-35-2e. Spd.
Magnolia Pet. Co. No. 1 Baird, SW SE SE sec. 2-30-4w. Drlg. 1,761 ft.
W. M. McKnab No. 1 Blair, SW cor. sec. 7-30-1e. Drlg. 3,153 ft.
R. J. Wixson No. 1 Newton, SE SE sec. 21-30-2e. S.D. 1,975 ft.

Trego County

Central Commercial Oil Co. No. 1 Locker, C SW sec. 12-14-22w. Drlg. 3,000 ft.
Thurman Hill et al No. 1 Lawson, SW SW NW sec. 7-14-22w. Drlg. 2,560 ft.
Phillips Pet. Co. No. 1 Trego, C SE SW sec. 14-12-23w. W.O.C. 3,935 ft.
F. L. Thorn et al No. 1 Koeppen, SE SE SW sec. 31-14-24w. U.R. 5-in. 4,410 ft.

Woodson County

Becker Bros. et al No. 1 Vann, NW SW SE sec. 22-25-14. T.D. 1,487 ft.; U.R. 6-in.
Fred Rapp No. 1 Houghland, NW NW SE sec. 2-25-15. S.D. 1,520 ft.
Seibel No. 1 Kerschner, CNL NE NE sec. 3-26-15. S.D. 1,498 ft.
Steinle No. 1 Kash, SE SE sec. 4-26-15. S.D. 1,570 ft.

OKLAHOMA

Week Ending September 25

NORTHERN OKLAHOMA

Beckham County

Mid-American Oil Co. No. 1-A Biscoe, SW cor. sec. 28-8-22w. T.D. 2,220 ft.; S.D.

Caddo County

Clyde Becker et al No. 1 Pharris, SE SE NW sec. 24-6-12w. T.D. 6,235 ft.; S.D.O.
Indian Terr. Illum. Oil Co. No. 1 Dome-Bo, C NE SE sec. 29-6-10w. Cg. 4,170 ft.

Cleveland County

W. R. Hollenbeck No. 1 Norman, NW NW NE sec. 17-9-2w. Drlg. 7,401 ft.

Creek County

L. B. Jackson No. 1 Alberty, NE NE NW sec. 25-19-9. T.D. 2,975 ft.; flwd. 200 B. P.D.; comp.
M. W. Mosier et al No. 1 Holcomb, SE SW NW sec. 19-18-8. T.D. 3,018 ft.; P.B. 3,015 ft.; cmtg. csg.

Garvin County

Carter Oil Co. No. 1 Potts, C E½ SE NW sec. 36-1n-3w. Drlg. 2,692 ft.
B. C. D. Edwards No. 1 Clark, NE cor. sec. 16-3n-3e. T.D. 2,101 ft.; fsg.

Grady County

Gulf Oil Corp. No. 1 Thomas, SW NW NW sec. 14-4-5w. Drlg. 7,750 ft.

Grant County

Carter Oil Co. et al No. 1 Crisman, C W½ SW NW sec. 16-25-3w. T.D. 5,410 ft.; flwd. 756 B.O. and 322 B.W. in 24 hrs.; comp.

Haskell County

Continental Oil Co. No. 1 Ferguson, SW SE NE sec. 33-8-20. Wilcox 6,882 ft.; drlg. 6,909 ft.

Hughes County

W. O. Allen No. 1 Barnard, SW cor. sec. 24-8-8. T.D. 4,274 ft.; P.B. 3,423 ft.; est. 3,000,000 ft. gas.
Burke-Greis Oil Co. No. 1 Rhea, SW SW SE sec. 14-10-9. Drlg. 1,700 ft.
E. H. Moore, Inc., No. 1 Buck, NW SW SW sec. 21-8-10. T.D. 4,025 ft.; fsg.
Phillips Pet. Co. No. 1 Becker, NE NW SW sec. 8-5-10. Drlg. 2,971 ft.

Kay County

E. J. Shaffer et al No. 1 McKee, NE NW sec. 20-28-1w. Spd. and S.D.

Kiowa County

Hughes & Reese No. 1 Fultz, SE cor. sec. 10-6-18w. T.D. 810 ft.; S.I.
Kiowa Oil Corp. No. 1 Finder, C SW NE sec. 4-6-20w. T.D. 1,050 ft.; S.D.
H. L. Wirick et al No. 1 Noske, SE SE NW sec. 1-6n-17w. Drlg. 1,121 ft.

Latimer County

Clark Drlg. Co. et al No. 1 Wilson, C SE SE sec. 15-5-18. T.D. 6,515 ft. in Atoka: P.B. 3,820 ft.; perf. 2,720-2,970 ft.; S.D.

Lincoln County

Ardie Oil Co. No. 1 State, NE NE SE sec. 16-14-4. Cg. 4,976 ft.
Continental Oil Co. et al No. 1 Community, NW NW SE sec. 7-15-5. Drlg. 4,190 ft.

Logan County

Sunray Oil Co. and Olson Drlg. Co. No. 1 Canning, SW SW NE sec. 31-17-1w. Drlg. 5,109 ft.

Noble County

Darby Pet. Corp. No. 1 McCoy, SE SE SW sec. 24-23-2w. Drlg. 2,940 ft.
Seaboard Western Oil Co. et al No. 1 Guthrie, NW NW NE sec. 6-20-2w. Drlg. 5,373 ft.

Okfuskee County

F. W. Merrick No. 1 Mackey, NE NE SW sec. 29-11-10. Drlg. 3,275 ft.
Riverland Oil Co. No. 1 Board, NE NW SE sec. 10-13-10. Set 6-in. 2,788 ft.; T.D. 2,840 ft.

Pawnee County

J. F. McManmon et al No. 1 School Land, NW NW NE sec. 16-21-5. Drlg. 2,120 ft.

Pittsburg County

Okla. Dist. Oil Co. No. 1 Beeler, NE NE SW sec. 7-7-14. T.D. 5,165 ft.; C.O.
Phillips Pet. Co. No. 1 Gilcrease, NW NW SE sec. 16-7-12. T.D. 2,990 ft.; S.D. rep.

Pontotoc County

Boettcher O. & G. Co. No. 1 Cann, SE NW NE sec. 25-4n-7e. T.D. 4,347 ft.; S.D.
Kerlyn Oil Co. No. 1 Pratt, SW SE NE sec. 6-4-4e. Wilcox 2,290-2,355 ft.; T.D.; rng. Schlumberger.
Norbia Oil Co. No. 1 McBride, NE NE SW sec. 10-2n-5e. Loc.
Papoose Oil Co. et al No. 1 Jones, NW SE NW sec. 2-4-5. Viola 2,595 ft.; T.D. 2,840 ft.; run Schlumberger; S.D.O.
Union Dev. Co. No. 1 Abbott, SW NW NE sec. 34-3-6. T.D. 3,320 ft.; drill pipe stuck. S.D.

Pottawatomie County

Mid-Continent Pet. Corp. No. 1 Ne-Thah-Pea-Se, SE SE NE sec. 24-11-4. Dol. 4,853-86 ft.; shot; flwd. 70 B.O. in 6 hrs.; S.I. for connection.
Roy S. Nash et al No. 1 Miller, C N½ NE SE sec. 29-6-3e. T.D. 4,415 ft.; bailing.

Seminole County

E. W. Jones et al No. 1 Belford, NE SE NE sec. 9-9-8. Drlg. 4,597 ft.
Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Salina, SE NE NW sec. 4-5-6. T.D. 3,317 ft.; P.B. 3,216 ft.; acd.; swbd. 20 B.O. and 200 B.W. in 24 hrs.

Texas County

Hagey et al No. 1 Becker, C NE sec. 4-1n-13ecm. T.D. 1,695 ft.; pipe stuck.
Hagey et al No. 1 Peck, C NE sec. 6-1n-13ecm. Rig.

Washita County

John Koberg No. 1 Harms, NW NW NE sec. 6-10-16w. T.D. 4,260 ft.; S.D.

SOUTHERN OKLAHOMA

Atoka County

A. L. Larson No. 1 Mason, SW SE SE sec. 35-1n-14. S.D. 180 ft.
C. M. Sheldon and Gardner Pet. Co. No. 1 Lee, NE NW SW sec. 2-4s-10e. Drlg. 750 ft.

Coal County

Carter Oil Co. No. 1 Claytor, C W½ NE SW sec. 27-2n-9e. Drlg. 6,018 ft.
Phillips Pet. Co. No. 1 Beck, SE SW SW sec. 6-1n-9e. Drlg. 3,530 ft.

Comanche County

M. J. Andrichak No. 1 Korthouse, NW NE SW sec. 35-2n-10w. T.D. 1,095 ft.; 2,000,000 ft. gas; S.I.
Frank Scott No. 1-A Kuntz, SE NE SE sec. 21-4n-11w. T.D. 2,800 ft.; abd.

Jackson County

Ace Gutowsky No. 1 Booker, NW cor. sec. 33-2n-18w. Drlg. 964 ft.
Ace Gutowsky No. 1 Howard, NE SW NW sec. 10-3n-19w. T.D. 950 ft.; S.D.
E. L. Lippert et al No. 1 Miller, NW cor. sec. 4-2n-18w. T.D. 713 ft.; bailing.

Johnston County

Patton et al No. 1 McCrummins, C SW SW NE sec. 16-1s-6e. Drlg. 1,260 ft.
W. T. Sheldon No. 1 Chapman, C NW NW sec. 26-4s-6e. T.D. 1,812 ft.; S.D.

Marshall County

Paul Robb et al No. 1 Vittitoe, C NE SE sec. 11-5s-4e. O.W.D.D.; C.O. to 720 ft.; S.D.

Murray County

Meyer & Greenup No. 1 Arbuckle, NW NW NE sec. 18-2s-3e. Spd. and S.D.
O. O. Owens No. 1 Fryer, NE SE NE sec. 34-1s-3e. T.D. 2,574 ft.; 1,400 ft. W.I.H. S.D.
Sinclair Prairie Oil Co. No. 1 Lancaster Trust, C SW NE sec. 10-1-2e. Drlg. 4,155 ft.

Pushmataha County

Erle Halliburton et al No. 1 Bagwell, SW NE NE sec. 30-3s-15e. T.D. 5,050 ft.; S.D. repairs.

Stephens County

Carter Oil Co. No. 1 Harley, C NE NE sec. 24-2s-4w. T.D. 8,157 ft.; acd.; flwd. 1,790 B.O. in 16 hrs.; comp.
Jack Cohen No. 1 Pierce, NE NE NW sec. 24-2s-6w. Drlg. 1,360 ft.
Coline Oil Co. No. 1 Johnson, C SW SE SE NE sec. 1-2n-8w. Drlg. 9,760 ft.
Chas. Newsom No. 1 Pfile, SW cor. sec. 1-2s-7w. Drlg. 1,925 ft.
Ed Parsons No. 1 Blake, C SW NW sec. 22-2n-8w. T.D. 4,995 ft.; swb. 60 B.O. in 24 hrs.; to deepen.

Tillman County

Cavens et al No. 1 Southerland, SW SW NW sec. 35-4s-16w. T.D. 44 ft.; S.D.
Gulf Oil Corp. No. 1 Prichard, SE NW SE sec. 32-3s-16w. Drlg. 4,145 ft.
Indian Territory Ill. Oil Co. No. 1 Graham, SE SE NE sec. 1-3s-19w. T.D. 3,081 ft.; flwd. 506 B.O. daily; comp.
Tom Walker No. 1 Bowman, SW SW NW sec. 10-4s-17w. S.D. 200 ft.

ARKANSAS

Columbia County

Standard of La. No. 1 J. P. McKean, SW sec. 8-16s-22w. Drlg. 6,553 ft.
Tide Water-Seaboard Oil Co. No. 1 Crumpler, SW NE SW sec. 24-17-19w. Drlg. 2,225 ft.

Cross County

Manning & Martin, Inc., No. 1 Park-Greseck, NW NE NE sec. 4-6n-5e. Drlg. 4,220 ft.

Hempstead County

H. D. Easton et al No. 1 R. M. LaGrone, sec. 5-12-26. Fsg. D.S.; T.D. 2,940 ft.
Shephard & Todd et al No. 1 Smith, NW SW NE sec. 11-11-25. S.D. 2,290 ft.

Miller County—Rodessa

Anding & Bird No. 4 Skipper, SW NW SW sec. 11-20-28. 16-in. 94 ft.; drlg. 150 ft.; (now Skipper No. 2).
F. W. Burford No. 1 A. J. Cross, E½ SE NE sec. 11-20-28. 13⅜-in. 194 ft.; drlg. 1,725 ft.
F. W. Burford No. 1 Ahern, S½ NE SW sec. 10-20-28. Cg. 5,960 ft.
F. W. Burford No. 1 August, S½ SE SW sec. 8-20-27. Cg. 5,990 ft.
F. W. Burford No. 2 A. A. Capps, sec. 14-20-28. Drlg. 4,825 ft.
F. W. Burford No. 1-B A. A. Capps, NE SE SE sec. 11-20-28. Comp.; flw. 50 B. P.H.; T.D. 6,091 ft.
F. W. Burford No. 1 S. B. Davis, SW cor. SE NE sec. 11-20-28. Drlg. 5,175 ft.
F. W. Burford No. 3 Easton, sec. 11-20-28. Comp.; flw. 50 B.P.H.; T.D. 6,075 ft.
F. W. Burford No. 1 Gardner-Means, SW NW sec. 11-20-27. Cg. 5,970 ft.
F. W. Burford No. 1-B G. G. Gerald, NE S½ sec. 15-20-28. Comp.; flw. 34 B.P.H.; T.D. 6,033 ft.
F. W. Buford No. 2-B G. G. Gerrald, sec. 15-20-28. R.U.
H. L. Hunt No. 1 Womack, SE sec. 10-20-28. Drlg. 5,950 ft.
H. L. Hunt No. 2 Womack, NE SW SE sec. 10-20-28. Drlg. 5,000 ft.
H. L. Hunt No. 3 Womack, NW SW SE sec. 10-20-28. 9⅝-in. 2,066 ft.; drlg. 2,280 ft.
Kroll & Travis No. 1 Dickson, SW SE NW sec. 11-20-28. 13⅜-in. csg. 190 ft.; drlg. 1,750 ft.
Roger Lacey No. 1 Grogan, SE cor. sec. 15-20-28. Drlg. 5,455 ft.
Wm. M. Layton No. 4 Terry, SW cor. sec. 14-20-28. Drlg. 5,565 ft.
R. H. Long No. 1 Greer, SW NE SE sec. 10-20-28. 10¾-in. 2,026 ft.; drlg. 2,150 ft.
McClanahan et al No. 1 J. P. Greer, SE SW NW sec. 11-20-28. 13⅜-in. 168 ft.; drlg. 1,450 ft.
McClanahan et al No. 3 Capps, sec. 11-20-28. Drlg. 4,210 ft.
McClanahan et al No. 4 Capps, NE NE SW sec. 11-20-28. 10¾-in. 200 ft.
McClanahan et al No. 5 Capps, NW SW SW sec. 11-20-28. 10¾-in. 2,025 ft.; drlg. 3,970 ft.
McClanahan et al No. 1-B Capps, N½ SW SW sec. 12-20-28. Drlg. 4,995 ft.
J. R. Ostrom No. 1 J. O. Gerrald, NW E½ sec. 15-20-28. Drlg. 3,725 ft.
Roberts Bros. Drlg. Co. No. 2 W. A. Capps, SW NW SE sec. 16-20-28. Drlg. 4,260 ft.
Roberts Bros. Drlg. Co. No. 3 W. A. Capps, SE SW NE sec. 16-20-28. Drlg. 4,310 ft.
Texas Canadian Oil Co. No. 1 Dickson, SE NW sec. 11-20-28. Drlg. 4,335 ft.

Pulaski County

A. L. Kitselman No. 2 A. L. Kitselman Jr., SE SE SW sec. 2-1s-13e. S.D. 1,190 ft.

Union County—Schuler

E. M. Jones et al No. 1 Marine Oil Co. fee NW SW SE sec. 17-18-17. Comp.; flw. 1,575 B.P.D.; T.D. 7,571 ft.
Lion Oil Ref. Co. No. 1-A Edna Morgan, O.W.D.D.; drlg. 6,522 ft.
W. D. Wingfield et al No. 1 Sou. Kraft Corp., SW NE sec. 18-19-14. W.O.O. 5,295 ft.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo—Rodessa

F. W. Burford No. 1 Pitts, NW sec. 1-23-16. Drlg. 5,690 ft.
Gulf Ref. Co. No. 2 Campbell, C sec. 4-23-16. 9⅝-in. 2,067 ft.; drlg. 4,525 ft.
Holcomb & Thomasson No. 1 Smith, SE sec. 4-23-16. 7-in. cmt. 5,959 ft.; T.D. 6,018 ft.; comp.; flw. 145 B.P.D.
Magnolia Pet. Co. No. 1 G. W. Hardy, sec. 1-23-16. Drlg. 5,260 ft.
R. W. Norton No. 7 Starke, NW sec. 17-23-16. 9⅝-in. 2,042 ft.; drlg. 4,055 ft.
R. W. Norton No. 8 Starke, NW sec. 17-23-16. 7-in. 5,906 ft.; T.D. 5,991 ft.
R. W. Norton No. 9 Starke, NW sec. 17-23-16. 6⅝-in. 5,908 ft.; T.D. 6,000 ft.
R. W. Norton No. 10 Starke, NW sec. 17-23-16. Drlg. 4,975 ft.
R. W. Norton No. 12 Starke, NW sec. 17-23-16. 6-in. 5,925 ft.; T.D. 5,983 ft.; comp.; flw. 227 B.P.D.
Standard Oil of La. No. 1-C Parker, NE NE NW sec. 9-23-16. Cg. 5,985 ft.
United Gas No. 5 Starke, SE sec. 8-23-16. 7-in. 5,912 ft.; T.D. 6,000 ft.; comp.; flw. 175 B.P.D.

N. LOUISIANA WILDCATS

Bienville Parish

H. L. Hunt and Seaboard Oil Co. No. 1 Commercial Real Estate Corp., NE NW sec. 3-16-6. T.D. 6,801 ft.; comp.; 1,000,000 ft. gas and 24 bbls. dist. daily.

Bossier Parish

Ark.-La. Gas Co. No. 4 R. O. Roy, sec. 18-17-11. Drlg. 3,185 ft.
L. W. Dennis No. 1 D. T. Roos, SW NW NW sec. 13-19-12. Rng. 7-in. csg.; T.D. 850 ft.
Triangle Drlg. Co. No. 1-A Schuler Est., SE NW sec. 13-17-12. Drlg. 2,860 ft.

Caddo Parish

W. D. Ambrose No. 3-B Pender, NW SW sec. 11-20-15. Will test; T.D. 2,196 ft.
La. Oil Prod. Co. No. 11-B Muslow, sec. 4-20-15. 6-in. 2,171 ft.
La. Oil Prod. Co. No. 12-B Muslow, sec. 4-20-15. Drlg. 250 ft.
Orr et al No. 1 Acme fee, C sec. 15-21-16. S.D. 1,882 ft.
G. W. Montgomery No. 1 Caddo Lvy. Bd., SE SW sec. 11-19-15. S.D. 1,200 ft.
L. J. Davis No. 1 Stiles, SE sec. 17-21-16. 8-in. 1,007 ft.; W.O.S.R. 1,019 ft.
W. J. Hunter et al No. 1 Stoer, NW SW NE sec. 10-15-15. P.B. and tstg.; T.D. 5,413 ft.; S.G.; perf. 5,100-20 ft.; comp.; est. 2,000,000 ft. gas and 10 bbls. dist. daily; T.D. 5,120 ft.
La. Oil Prod. Co. No. 10-B Muslow, SW SE SW sec. 4-20-15. T.D. 2,172 ft.; W.O.S.R. 2,194 ft.
Prairie River Synd. No. 1 Hutchinson, SW NW sec. 15-15-12. D.S.T. 8,989-9,024 ft.; tstd. dry; will deepen.
Surf-Maji Oil Co. No. 3 Self, SE sec. 10-20-15. Drlg. 1,860 ft.

Claiborne Parish

Atlantic Ref. Co. No. 4 F. B. King, W½ SE SE sec. 35-21-5. 5-in. 5,211 ft.; T.D. 5,223 ft.; comp.; flw. 45 B.P.H.
Atlantic Ref. Co. et al No. 1-C Patton, sec. 29-21-4. 10¾-in. 726 ft.
R. L. Bauman No. 1 C. S. L. Patton, NW SW NW sec. 1-20-5. 10¾-in. 840 ft.; drlg. 3,600 ft.
Gulf Rfg. Co. No. 2 S. E. Tatum, S½ SW SW sec. 32-21-4. 7-in. 5,276 ft.; swbg. to test; T.D. 5,309 ft.
Harry Hanbury No. 2-B R. Vaughn, N½ SW SE sec. 25-21-5. Comp.; flw. 90 B. P.H.; T.D. 5,262 ft.
Harry Hanbury No. 2-C R. Vaughn, N½ SE SE sec. 25-21-5. 5½-in. 5,230 ft.; T.D. 5,254 ft.
Hollifield & McFarland No. 1 W. H. Patton, E½ NE NE sec. 2-20-5. 7-in. 5,235 ft.; T.D. 5,246 ft.
Hollifield & McFarland No. 2 H. W. Patton, W½ NE NE sec. 2-20-5. 10¾-in. 719 ft.; drlg. 2,180 ft.
T. L. James No. 1 Baker, sec. 25-21-5. Swbg. to test; T.D. 5,222 ft.
T. L. James No. 1 D. E. Fowler, W½ NE SW sec. 32-21-4. 7-in. 5,190 ft.; T.D. 5,224 ft.
Lyons & Neely No. 1 Simms, NE NE sec. 32-20-5. Drlg. 2,500 ft.
Magnolia Pet. Co. No. 1 Fowler, W½ SE SW sec. 32-21-4. Will set 7-in.; T.D. 5,254 ft.
Magnolia Pet. Co. No. 4 H. E. Patton, S½ SE SW sec. 36-21-5. 7-in. 5,270 ft.; T.D. 5,281 ft.; comp.; flw. 27 B.P.H.
W. L. McClanahan No. 1 J. T. Lewis, W½ SW SE sec. 25-20-7. R.U.
Olson Drlg. Co. No. 2 J. T. Bean, N½ NW NW sec. 33-21-4. 7-in. 5,114 ft.; T.D. 5,141 ft.
A. O. Olson No. 2-B T. F. Patton, N½ SE SW sec. 29-21-4. Drlg. 4,800 ft.
Olson Drlg. Co. No. 3-A T. F. Patton Est., SE cor. SW sec. 30-21-4. 7-in. 5,162 ft.; T.D. 5,185 ft.
C. R. Schuster No. 3 Patton Est., N½ NE NE sec. 1-20-5. Drlg. 4,520 ft.
Scouts Oil Corp. No. 1 Bean, E½ NE NW sec. 32-21-4. Drlg. 4,930 ft.
Sloan & Zook Co. No. 1 Patton Est., W½ NE NW sec. 1-20-5. Comp.; flw. 170 B. P.D.; T.D. 5,261 ft.
Shreveport Oil Corp. No. 1 Edwards, NE sec. 16-20-5w. T.D. 5,438 ft.; swbg. csg.
Standard Oil of La. No. 4 F. B. King, sec. 35-21-5. Comp.; flw. 61 B.P.H.; T.D. 5,304 ft.
United Gas et al No. 1 J. W. Stevenson, SE SW SE sec. 6-19-5. 5⅝-in. 5,532 ft.; drlg. 5,670 ft.
G. H. Vaughn et al No. 1 Eppinger, SW sec. 29-21-4. Drlg. 4,040 ft.

Concordia Parish

Coastal Mineral & Dev. Co. No. 1 Winsten, sec. 23-7-9e. Drlg. 2,210 ft.
Edward A. Addy et al No. 1 Posternack, NW SW sec. 49-8n-9w. S.D. 50 ft.

De Soto Parish

Clear Lake Oil Co. No. 1 J. A. Woolums, NW sec. 29-12-12. S.D. 2,300 ft.
Pullman Oil Co. No. 4 Ramsey, NE SW NW sec. 36-11-11. S.D. 2,934 ft.

Franklin Parish

Tensas Delta Oil Corp. No. 1 Woodland, NE sec. 22-11-9. Comp.; dry; abd. 6,500 ft.

LaSalle Parish

Buck Granshaff et al No. 1 Russell, sec. 25-10-1e. S.D. 1,200 ft.

Lincoln Parish

J. E. Burford, Sr., No. 1 Hanna, SE SW SE sec. 34-18-4w. Cg. 6,575 ft.
Gigantic Oil Co. No. 1 R. L. Sanderson, NW SE NW sec. 30-18-1w. T.D. 50 ft.; S.D.
T. L. James No. 1 J. J. Spence, SW NE sec. 11-17-4. Dry 6,619 ft.; will deepen.
Ludel Oil Corp. No. 1 Gill, NE NE NW sec. 36-20-2w. Drlg. 4,930 ft.
Lyons & Neely No. 1 H. E. Patton, N½ NE SW sec. 6-20-4. 5-in. 5,334 ft.; T.D 5,367 ft.; comp.; flw. 20 B.P.H.
Lyons & Neely No. 2 H. W. Patton, S½ SW NW sec. 6-20-4. Drlg. 4,571 ft.
Lyons & Neely No. 2-B H. E. Patton, C S½ NE SW sec. 6-20-4. Drlg. 900 ft.
Magnolia Pet. Co. No. 1 F. Corbin, W½ NE NE sec. 6-20-4. 7-in. 5,320 ft.; T.D. 5,336 ft.
Magnolia Pet. Co. No. 2 F. Corbin, NE cor. sec. 6-20-4. 10¾-in. 823 ft.
E. H. Moore, Inc. No. 1 Arcadia Comm. Bank, C NW sec. 22-18-5. Drlg. 2,540 ft.
Red Iron Drlg. Co. No. 1 T. F. Patton, NW SW NE sec. 6-20-4. Drlg. 2,740 ft.

Red River Parish

Gulf Ref. Co. No. 28 L. E. Kennedy, NW sec. 25-13-11. W.O.S.R. 2,552 ft.
Gulf Ref. Co. No. 42 E. T. Robinson, NW sec. 25-13-11. 6-in. 2,477 ft.; T.D. 2,486 ft.
W. J. Hunter No. 2 Long Bell Lbr. Co., SW NW sec. 20-19-9. S.D. 4,004 ft.
Jones et al No. 1 Morston, SW SE sec. 14-13-11. 6-in. 2,490 ft.
J. C. Prine No. 1 Haynes, SW sec. 20-13-10. Swbg. 2,555 ft.
T. S. Shaw No. 5 Wilkinson, NW SE SE sec. 4-12-10. 7-in. 2,567 ft.
W. K. Williams No. 2 Padock, SE SW NW sec. 33-13-11. Cg. Will make D.S.T.; T.D. 2,500 ft.

Webster Parish

V. L. Foster No. 2 J. M. Mixon, SE sec. 21-21-10. Drlg. 4,285 ft.
Magnolia Pet. Co. No. 4 Aarnes-Cox, NW sec. 22-21-10. Drlg. 6,425 ft.
Ohio Oil Co. No. 47 Bodcaw Acct. 2, SW SE sec. 15-21-10. Drlg. 7,720 ft.
Ohio No 1 S. P. D. Coyle and W. Cox, SW SW SE sec. 23-21-10. Drlg. 6,820 ft.
Ohio Oil No. 1 T. Crichton, Acct. No. 2, SE NE sec. 21-21-10. Drlg. 7,880 ft.
Ohio No. 7-B R. L. Holloway, 586 ft. N. 756 ft. E line, sec. 23-21-10. Drlg. 7,545 ft.
A. G. Oliphant et al No. 1 Banks, NE NE sec. 34-21-10. Drlg. 7,350 ft.
Ohio Oil Co. No. 1 D. W. Merritt, SW cor. sec. 14-21-10. Drlg. 6,935 ft.
Standard Oil Co. of La. No. 7 Mrs. M. F. Davis, NE NE NW sec. 23-21-10. 9⅝-in. 5,617 ft.; T.D. 5,788 ft.
Standard Oil Co. of La. No. 2-B Mrs. M. E. Gray, NE NE NW sec. 26-21-10. Drlg. 6,050 ft.
United Gas No. 6 Tillman, NE sec. 28-21-10. Drlg. 100 ft.
Woodley Pet. Co. No. 2-B L. C. Cox. Drlg. 7,225 ft.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 Brookshire, sec. 66-12s-3e. T.D. 11,909 ft.; tried to blow out; stuck D.S.

Anse La Butte—St. Martin Parish

Crusader Pet. Co. No. 3-B Begnaud. Cg. sd. 3,555 ft.

Bay St. Elaine—Terrebonne Parish

F. J. LeBlanc No. 2 Wurzlow, sec. 17-22s-18e. S.D. 910 ft.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 4 Wilbert, sec. 74-9s-10w. T.D. 4,106 ft.; P.B. sdtrkd.; drlg. sh. 4,208 ft.

Bayou Cocotris—Terrebonne Parish

Shell Pet. Corp. No. 2 Pelican, sec. 19-17s-15e. Drlg. sh. 7,918 ft.
Shell Pet. Corp. No. 3 Pelican, sec. 19-17s-15e. Drlg. sh. 7,827 ft.

Bayou De Allemands—St. Charles Parish

Amerada Pet. Corp. No. 1 St. Charles Ld. Co., sec. 38-15s-20e. Drlg. sd. 2,683 ft.

Big Lake—Cameron Parish

Union Sulphur Co. No. 1 P. J. Hebert, sec. 18-12s-8w. 6⅝-in. csg. 8,441 ft.; drlg. sd. 8,981 ft.
Union Sulphur Co. No. 2 J. O. Hebert, sec. 18-12s-8w. Drlg. sh. 1,565 ft.

Bosco—Acadia Parish

Superior Oil Co. No. 1 J. L. Larcade, sec. 34-8s-3e. R.U.

Cameron Meadows—Cameron

Burton-Sutton Oil Co. No. 19 Sch. Ld., sec. 16-14s-13w. Drlg. sd. 2,819 ft.

Charenton—St. Mary Parish

Pan American Prod. Co. No. 1 Dolph, sec. 36-13s-9e. Drlg. sd. and gravel 875 ft.
Pan American Prod. Co. No. 1 Landry, sec. 25-13s-9e. Drlg. sd.&sh. 8,799 ft.
Pan American Ref. Co. No. 4 Laws Realty Co., sec. 30-13s-10e. Drlg. sd. 7,743 ft.
Pan American Prod. Co. No. 2 South Coast Corp., sec. 31-13s-9w. Drlg. sh. 1,425 ft.
Pan American Prod. Co. No. 1 Veeder sec. 30-13s-10e. T.D. 9,462 ft.; P.B. 2,615 ft.; 7-in. csg. 2,615 ft.; perf. csg. 2,589-91 ft.; made squeeze job; to reperf. csg.

Choctaw—Iberville Parish

Standard Oil Co. No. 10 Grove, sec. 52 9s-11e. T.D. 5,303 ft. in salt; D.S. stck. P.B. 4,650 ft. to sdtrk.
Standard Oil Co. No. 7 Gay, sec. 52-9s-11e. Cmtd. 13⅜-in. csg. 956 ft.; T.D. 4,694 ft.; run 9⅝-in. csg.

Darrow—Ascension Parish

Humble O. & R. Co. No. 16 Community, sec. 29-10s-2e. Drlg.
Humble O. & R. Co. No. 11 Gumble, sec. 35-10s-2e. Salt 7,894 ft.; abd.
Kiva Oil Co. No. 1 Dupiessis, sec. 69-10s-2w. R.U.

Dog Lake—Terrebonne Parish

Texas Co. No. 18 State, sec. 5-22s-16e. Drlg. sh. 7,606 ft.
Texas Co. No. 20 State, sec. 5-22s-16e. Drlg. sdy. sh. 3,333 ft.

Edgerly—Calcasieu Parish

Crusader Pet., Inc., No. 1 Miller Bros., sec. 27-9s-11w. T.D. 6,082 ft.; oil sd.; 7-in. csg. 6,078 ft.; pulled screen and lnr.; swog. through lnr.

Four Isle—Terrebonne Parish

Texas Co. No. 9 L.L.&E., sec. 24-21s-16e. Drlg. sh. 6,991 ft.

Garden Island—Plaquemines Parish

Texas Co. No. 24 State, sec. 37-23s-33e. Drlg. sh. 3,121 ft.

Gillis—Calcasieu Parish

Union Sulphur Co. No. 3 Bel, sec. 2-9s-8w. Abd. 7,724 ft.
Union Sulphur Co. No. 8 Castle, sec. 13-9s-8w. T.D. 7,153 ft.; 5-in. csg. 7,153 ft.; flwd. oil and S.W.; set retainer; perf. csg. 5,180-82 ft.; cutting and pulling screen; tstd gas; comp. for dry gas well.
Union Sulphur Co. No. 7 Kaufman, sec. 13-9s-8w. Core sd. 7,075 ft.

Hackberry—Cameron Parish

W. T. Burton No. 3 Lewis, sec. 22-12s-10w. R.U.
W. T. Burton No. 4 Vincent, sec. 22-12s-10w. T.D. 4,631 ft.; 7-in. csg. 4,570 ft.
W. T. Burton No. 1 Porter Ellender, sec. 27-12s-10w. Core oil sd. 5,062 ft.
M. P. O'Meara No. 1 Rigmaden heirs, sec. 22-12s-10w. Drlg.
Stanolind O. & G. Co. No. 6 Duhon, sec. 22-12s-10w. R.U.
Stanolind O. & G. Co. No. 1-B Duhon, sec. 27-12s-10w. T.D. 6,233 ft.; 7-in. csg. 5,815 ft.; sdtrkg. 5,309 ft.; T.D. 5,778 ft.; abd.
Stanolind O. & G. Co. No. 8 Carter & Sweeney, sec. 22-12s-10w. R.U.
Stanolind O. & G. Co. No. 10 Carter & Sweeney, sec. 22-12s-10w. Drlg.
Stanolind O. & G. Co. No. 11 Carter & Sweeney, sec. 22-12s-10w. 10¾-in. csg. 1,451 ft.; drlg. sh. 2,875 ft.
Stanolind O. & G. Co. No. 53 State, sec. 22-12s-10w. 10¾-in. csg. 1,930 ft.; T.D. 6,648 ft.; P.B. 4,080 ft.
Sutton-Burton Oil Co. No. 3-A Doiron, sec. 22-12s-10w. T.D. 4,948 ft.; 7-in. csg. 4,928 ft.; I.P. 101 bbls. in 8 hrs.; ¼-in. ck.
Texas Co. No. 23-B State, sec. 12-12s-9w. T.D. 5,448 ft.; P.B. 2,409 ft.; drlg. sh. 7,274 ft.
Union Sulphur Co. No. 9 Doiron, sec. 37-12s-10w. 5-in. csg. 6,176 ft.; P.B. 5,510 ft.; perf. csg. 5,485-5,510 ft.; pmpg. 4 bbls. P.L.O. per day.

Lockport-Cameron Parish

Magnolia Pet. Co. No. 35 Miller, sec. 9-10s-9w. Drlg. sh. 3,915 ft.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 1 Banta, sec. 40-13s-9e. Set 7-in. csg. 9,768 ft.; cg. sh. 10,390 ft.
Herton Oil Co. No. 5 Roans, sec. 40-13s-9e. T.D. 8,098 ft.; recmtd. csg.

Jennings—Acadia Parish

Frank W. Bennett et al No. 1 Brethern and Christ Church, sec. 41-7s-2w. T.D. 7,107 ft.; D.S. stuck; shot; pulling.
W. T. Burton No. 3 J. J. Roboria, sec. 41-9s-2w. T.D. 7,206 ft.; 7-in. csg. 7,085 ft.
Cosmo Pet. Co. No. 1 M. E. Crusel, sec. 42-9s-2w. T.D. 7,226 ft.; tstg.
Glassell No. 1 Bourgeaux, sec. 41-9s-2w. T.D. 6,664 ft.; 7-in. csg. on bttm.; perf. csg. 6,590-6,610 ft.; I.P. 593 B.P.D.; 13/64-in. ck.
Glassell & Glassell No. 3 McFarlain, sec. 41-9s-3w. Drlg. sh. 6,270 ft.
Louisiana Crusader Oil Co. No. 1 Lake Oil fee, sec. 45-9s-2w. T.A. 5,017 ft.; salt; P.B. 1,665 ft.; rmg.
M. P. O'Meara No. 1 McFarlain, sec. 41-9s-2w. T.D. 6,910 ft.; 7-in. csg. 6,815 ft.; I.P. 750 B.P.D., 15/64-in. ck.
M. P. O'Meara No. 1 Moresi, sec. 41-9s-2w. Drlg.
Reiter Foster Oil Co. No. 2 Crusel, sec. 42-9s-2w. R.U.
S. Rhodes No. 2 Iowa-Jennings, sec. 45-9s-2w. Drlg. sh. 3,151 ft.
Superior Oil Co. No. 7 Leckelt, sec. 42-9s-2w. R.U.
Superior Oil Co. No. 5 Leckelt, sec. 42-9s-2w. T.D. 7,146 ft.; run 7-in. csg.
Superior Oil Co. No. 4 Jennings-Haywood, sec. 41-9s-2w. Drlg. sd. 4,416 ft.
Superior Oil Co. No. 2 Moresi, sec. 41-9s-2w. T.D. 7,131 ft.; 7-in. csg. 7,131 ft.
Superior Oil Co. No. 3 Moresi, sec. 41-9s-2w. Core sdy. sh. 6,748 ft.

Lafitte—Jefferson Parish

Texas Co. No. 7 L.L.E., sec. 20-17s-24w. Drlg. sh. 2,024 ft.
Texas Co. No. 2 Milling, sec. 20-17s-24e. Drlg. sdy. sh. 9,541 ft.
Texas Co. No. 1 State-Bayou Norman, sec. 28-17s-24e. Drlg. sh.&L. 11,567 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 141 State, sec. 40-21s-19e. Drlg. sdy. sh. 3,437 ft.

Lake Hermitage—Plaquemines Parish

Gulf Ref. Co. No. 7 Lafourche, sec. 13-18s-25e. Drlg. sh. 7,951 ft.

Lake Pelto—Terrebonne Parish

Texas Co. No. 18 State, sec. 17-23s-18e. T.D. 1,551 ft.; W.O.C.

Lake Washington—Plaquemines Parish

Humble O. & R. Co. No. 25 Cockrell, sec. 35-20s-26e. Drlg. sdy. sh. 4,625 ft.

Lockport—Calcasieu Parish

Magnolia Pet. Co. No. 35 Miller, sec. 9-10s-9w. Drlg. sh. 3,915 ft.

Long Lake—Lafourche Parish

Fohs Oil Co. No. 2 State, sec. 65-17s-19e. R.U.
Fohs Oil Co. No. 3 State, sec. 65-17s-19e. 10¾-in. csg. 2,743 ft.; drlg. sh. 7,040 ft.

New Iberia—Iberia Parish

Wm. Hellis No. 3 Schwing, sec. 57-12s-7e. T.D. 5,019 ft.; P.B. and sdtrkd.; salt 5,509 ft.; P.B. 2,650 ft.; drlg. sh. 3,612 ft.
Texas Co. No. 3 Bryant, sec. 25-12s-7e. R.U.
Wm. Hellis No. 9 Bernard, sec. 54-12s-7e. T.D. salt 5,171 ft.; P.B. and sdtrkd.; drlg. sh. 3,485 ft.
Wm. Hellis No. 10 Bernard, sec. 54-12s-7e. R.U.
Wm. Hellis No. 11 Bernard, sec. 54-12s-7e. Drlg. sdy. sh. 3,143 ft.
Wm. Hellis No. 6 Bullock-Burke, sec. 25-12s-7e. T.D. 4,817 ft.; P.B. and sdtrkd.; drlg. sh. 4,487 ft.
Texas Co. No. 3 Coleste, sec. 25-12s-7e. T.D. 5,132 ft.; P.B.; core sdy. sh. 5,025 ft.
Texas Co. No. 7-B Hanzen, sec. 54-12s-7e. T.D. 4,546 ft.; P.B. 3,825 ft.

Roanoke—Jeff Davis Parish

Humble O. & R. Co. No. 4 Taylor, sec. 72-9s-4w. Drlg. L. 5,445 ft.

South Jennings—Jeff Davis Parish

Loffland Bros. No. 1 Fontenot, sec. 16-10s-3w. Spd.

South Roanoke—Jeff Davis Parish

Union Sulphur Co. et al No. 1 T.R.S. Farms Co., sec. 23-10s-4w. T.D. 9,151 ft.; 7-in. csg. on bttm.; perf. csg. 9,136-40 ft.; tstd. dry gas; P.B.; perf. 8,605-10 ft.; made squeeze job; perftg. csg. 8,594-96 ft.; tstd. S.W.

Starks—Calcasieu Parish

Capital Oil Co. No. 1 Lutcher-Moore, sec. 24-9s-13w. R.U.
Lutcher Moore No. 2 fee, sec. 19-9s-12w. T.D. 4,184 ft.; 7-in. csg. 4,149 ft.
Turnbull et al No. 2 Industrial Lbr. Co., sec. 19-9s-12w. T.D. 4,861 ft.; S.D.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 847 fee, sec. 29-9s-10w. T.D. 5,570 ft.; 7-in. csg. 5,570 ft.; sanded up; P.B. 4,064 ft.
Union Sulphur Co. No. 849 fee, sec. 29-9s-10w. Drlg. sd. 4,511 ft.
Union Sulphur Co. No. 850 fee, sec. 29-9s-10w. Drlg. S.W. sd. 4,675 ft.
Union Sulphur Co. No. 851 fee, sec. 29-9s-10w. R.U.

St. Martinsville—St. Martin Parish

Tide Water Oil Co. No. 1-B Smedes, sec. 18-11s-6e. Drlg. sdy. sh. 6,039 ft.

Valentine—Lafourche Parish

Pan American Prod. Co. No. 9-A Harang, sec. 8-17s-20e. Drlg. sh. 1,875 ft.
Pan American Prod. Co. No. 10 Harang, sec. 7-17s-20e. Drlg. sd. 6,421 ft.
Pan American Prod. Co. No. 11 Harang, sec. 8-17s-20e. Drlg. sh. 2,730 ft.

Venice—Plaquemines Parish

Tide Water Oil Co. No. 4 Manhattan Fruit Co., sec. 26-21s-30e. Drlg. sh. 890 ft.

Vinton—Calcasieu Parish

Katina Oil Co. No. 2 Vincent, sec. 34-10s-12w. T.D. 4,140 ft.; P.B.
Superior Oil Co. No. 1 Gray, sec. 4-11s-12w. Drlg. sd.&sh. 5,314 ft.
Vinton Pet. Co. No. 23 Vincent, sec. 34-10s-12w. Drlg. sh. 1,382 ft.

White Castle—Iberville Parish

T. D. Humphray No. 1 E. B. Adams, sec. 1-11s-12e. Drlg. sdy. sh. 4,150 ft.
Shell Pet. Corp. No. 5 Shingle, sec. 12-11s-12e. 10¾-in. csg. 1,400 ft.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. Drlg. sh. 4,116 ft.
Gulf Oil Corp. No. 1 Euclia Broussard, sec. 49-10s-2w. R.U.
Humble O. & R. Co. No. 1 Floyd Williams, sec. 34-8s-1e. T.D. 9,339 ft.; P.B. 8,750 ft. perf. csg. 8,730-40 ft.; tstd. S.W.; P.B. 8,406 ft.; tstd. S.W.; P.B.; perf. csg. 8,072-8,102 ft.; I.P. 679 bbls. P.L.O. per day; ¾-in. ck.; T.P. 1,750 lbs.; C.P. 1,750 lbs.
Humble O. & R. Co. No. 1 R. A. Sarver, sec. 35-10s-1e. Drlg. sh. 7,150 ft.
Magnolia Pet. Co. No. 1 Duson, sec. 14-8s-2w. T.D. 350 ft.; pull D.S.
T. S. Markley No. 1 Daigle, sec. 19-7s-2e. Drlg. sd. 4,955 ft.

Calcasieu Parish

D. & D. Oil Co. No. 2 Lutcher-Moore, sec. 1-8s-13w. T.D. 8,340 ft.; run 9⅝-in. csg. drlg. plug.

Cameron Parish

Humble O. & R. Co. No. 1 Miami Corp., sec. 8-14s-5w. 20-in. pipe set 188 ft.; drlg. sh. 2,150 ft.
Pure Oil Co. No. 2 State, sec. 14-13s-3w. Drlg. sd. 8,605 ft.

Cameron Parish—Gulf of Mexico

Superior Oil Prod. Co. et al No. 1 State Gulf of Mexico, 3,800 ft. W, 6,200 ft. S of SE cor. of irregular sec. 4-15s-8w R.U.R.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Elliott, sec. 3-8s-2e. T.D. 6,127 ft.; D.S. stuck.

Evangeline Parish

Continental Oil Co. No. 1 Tate, sec. 44-3s-2e. T.D. 9,098 ft.; sd. and sh. showing oil cored 8,970-9,030 ft.; 7-in. csg. 9,098 ft.; perf. csg. 9,015-35 ft.; flwd. 36-grav. perf. csg. 9,007-35 ft.; I.P. 265 B.P.D. through various cks.; T.P. 2,150 lbs.; C.P. 2,350 lbs.
Schlicher Prod. Co. No. 1 Denois Ld. & St. Stone Co., sec. 35-3s-1w. 13⅜-in. csg. 720 ft.; T.D. 2,306 ft.; fsg.

Iberia Parish

Texas Co. No. 2-B Vermilion Bay, sec. 20-16s-5e. Drlg. sdy. L. 4,606 ft.

Jefferson Parish

Triangle Oil Co. No. 1 Conroe, sec. 125-12s-11e. Drlg. sh. 3,568 ft.

Lafourche Parish

Amerada Pet. Corp. No. 1 South Coast Corp., sec. 34-15s-19e. Drlg. sd. 6,558 ft.
Gulf Oil Corp. No. 3 State P.P., sec. 36-23s-21e. Recvd. 1,000 ft. of oil on 6-min. D.S.T. at 6,749-6,846 ft.; 9⅝-in. csg. 6,832 ft.; drlg. 7,121 ft.; rec. 2,000 ft. P.L.O. on D.S.T. 6,958-70 ft.; T.D. 7,269 ft.; P.B. 6,971 ft.; drlg. plug.
Wm. Helis No. 2 City of New Orleans, sec. 19-23s-23e. R.U.

Plaquemines Parish

Gulf Oil Corp. No. 3 State (Jackson dist). Drlg. sd. 5,442 ft.
Humble O. & R. Co. No. 6 Orleans Levee Bd., sec. 10-18s-15e. T.D. 1,575 ft.; abd.
Humble O. & R. Co. No. 11 Orleans Lve. Bd., sec. 10-18s-15e. Top sd. 688 ft.; T.D. 696 ft.; 7-in. csg. 676 ft.; I.P. 15 B.P.D. flwg. through ½-in. ck.

St. Bernard Parish

Southern Sulphur Co. No. 2 State Lake Borgne, sec. 38-14s-15e. 13⅜-in. csg. 303 ft.; S.D. 3,440 ft.

St. Martin Parish

Texas Co. No. 10 St. Martin, sec. 15-8s-7e. T.D. 5,360 ft.; rmg. to drill ahead.

St. Mary Parish

Texas Co. No. 1 State-Bateman Lake, sec. 21-16s-12e. 7⅝-in. csg. 10,515 ft.; drlg. sh. 11,132 ft.

Terrebonne Parish

Barnsdall Oil Co. No. 1 Dilbert, Stark & Brown Sur., sec. 110-16s-15e. R.U.

Vernon Parish

Castor Creek Drlg. Co. No. 1 Llano Del Rio, Inc., sec. 34-2n-9w. Drk.

TEXAS

Week Ending September 25

GULF COAST FIELDS

Hastings—Brazoria County

Humble O. & R. Co. No. 2-D W. F. Beers, Perry and Austin Sur. 9⅝-in. csg. 1,247 ft.; drlg. sh. 5,575 ft.
Humble O. & R. Co. No. 8-B Brown, Perry and Austin Sur. T.D. 6,080 ft.; 5½-in. csg. 5,996 ft.
Humble O. & R. Co. No. 7 R. D. Haden, R. Hoppel Sur. T.D. 6,080 ft.; I.P. 694 B.P.D.; ¾-in. ck.
Humble O. & R. Co. No. 8 R. D. Hacen, Wm. Henry Sur. Drlg. sh. 241 ft.
Humble O. & R. Co. No. 1 W. H. McDeed, H.T.&B. Sur. No. 30. T.D. 6,080 ft.; 5½-in. csg. 5,920 ft.
Humble O. & R. Co. No. 1 W. C. Tullos, H.T.&B. Sur. No. 29. R.U.
Pearland Oil Co. No. 1 C. H. Alexander, H.T.&B. Sur. No. 29. Drlg. sh. 3,739 ft.
Producers Inv. Co. No. 1 C. H. Alexander, H.T.&B. Sur. No. 28. Drlg. sh. 3,536 ft.
Stanolind O. & G. Co. No. 4 R. L. Autrey, H.T.&B. Sur. No. 7. R.U.

Stanolind O. & G. Co. No. 3-B W. H. Avitts, H.T &B. Sur. Drk.
Stanolind O. & G. Co. No. 7-B C. D. Brown R.U.
Stanolind O. & G. Co. No. 11-B Curkett, H.T.&B. Sur. No. 30. Drlg. sh. 1,250 ft.
Stanolind O. & G. Co. No. 15-B M. Curkett, H.T.&B. Sur. No. 30. R.U.
Stanolind O. & G. Co. No. 5 T. C. Edwards Wm. Henry Sur. T.D. 6,080 ft.; 7-in. csg. 6,078 ft.; perf. 6,037-77 ft.; I.P. 448 B.P.D.; ¼-in. ck.
Stanolind O. & G. Co. No. 14-B H. H. Ford, H.T.&B. Sur. No. 29. R.U.
Stanolind O. & G. Co. No. 8 R. O. Furface, B.B.B.&C. Sur. Drlg. sh. 5,430 ft.
Stanolind O. & G. Co. No. 6 J. F. Law, H. T.&B. Sur. No. 36. Core sd. 5,947 ft.
Stanolind O. & G. Co. No. 2 Matsushita, H. Stevens Sur. R.U.
Stanolind O. & G. Co. No. 2-C H. Moore, R. A. Magee Sur. Drlg. sh. 120 ft.
Stanolind O. & G. Co. No. 4-C Moore, R. A. Magee Sur. R.U.
Stanolind O. & G. Co. No. 9 L. D. Shaw, H T.&B. Sur. No. 36. Drlg. sh. 5,512 ft.
Stanolind O. & G. Co. No. 1 J. H. Sparks, H.T.&B. Sur. No. 29. R.U.
Stanolind O. & G. Co. No. 2 W. B. Thornton, H.T.&B. Sur. No. 29. R.U.
Stanolind O. & G. Co. No. 11 B. I. Turner, A.C.H.&B. Sur. No. 1. 10¾-in. csg. 1,242 ft.
Stanolind O. & G. Co. No. 12 Turner, A. C.H.&B. Sur. No. 1. Drlg. sh. 2,539 ft.
Stanolind O. & G. Co. No. 9 Williams, A. C.H.&B. Sur. Drlg. 80 ft.

Lockridge—Brazoria County

Gulf Oil Corp. No. 3 Baker, J. W. Hall Sur. Drlg. sh. 6,344 ft.
Gulf Oil Corp. No. 4 Carrie Baker, J. W. Hall Sur. Drk.
Gulf Oil Corp. No. 1 Great Southern, E. D. Robertson Sur. T.D. 6,283 ft.; make D.S.T.
Kirby Pet. Co. No. 2 Carrie Baker, J. W. Hall Sur. 10¾-in. csg. 1,400 ft.
McCurdy and Johnson No. 1 State, Brazos River. R.U.
Shell Pet. Corp. No. 4 Ramsey, J. W. Hall Sur. Drlg. sh. 4,635 ft.

Manvel—Brazoria County

F. D. Jones et al No. 1-A Bankers Mtg., E. Little Sur., Lot 75. T.D. 4,100 ft.; abd.
Texas Co. No. 26 Houston Oil Field Assn., A.C.H.&B. Sur. No. 91. Drlg. sh.&L. 3,099 ft.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 1 Land and Barnes, C. Breen Sur. R.U.
Harrison & Abercrombie No. 1 Larsen, C. Breen Sur. T.D. 10,761 ft.; 7-in. csg. 10,650 ft.; perf. csg. 10,630-44 ft.; I.P. 270 B.P.D.; 5/32-in. ck.
Harrison & Abercrombie No. 1 Smith, C. Breen Sur. 9⅝-in. csg. 7,016 ft.; drlg. sh. 9,047 ft.

Sandy Point—Brazoria County

H. J. DeArman No. 1 Edmundson, D. Talley Sur. Drlg. sh. 2,518 ft.
H. J. De Arman No. 2 J. A. Flte, D. Talley Sur. T.D. 6,505 ft.; oil sd.; 5⅞-in. csg. 6,498 ft.; I.P. 103 B.P.D.; ⅛-in. ck.

West Columbia—Brazoria County

Texas Co. No. 1 Gulf Oil Corp. fee, G. Tenille Sur. Drlg. 1,247 ft.
Texas Co. No. 87 Hogg, Tennille Lge. R.U.
Texas Co. No. 3 Phillips, G. Tennille Sur. Drlg. L. 4,795 ft.
Texas Co. No. 1 T. L. Smith, G. Tennille Sur. T.D. 5,588 ft.; 7-in. csg. 5,476 ft.; I.P. 591 B.P.D.; ¼-in. ck.

Calhoun—Heyser—Victoria County

Blanco Oil Co.-Buchanan No. 1 R. B. Morris, A. Sisneros Sur. Cg. sh. 5,400 ft.
Geo. Echols No. 1 W. H. Bennett, J. Galban Sur. R.U.
Gulf Oil Corp. No. 1 Schultz, J. E. Galban Sur. Drlg. sh. 4,110 ft.
Gulf Oil Corp. No. 1 T. P. Traylor, J. E. Galban Sur. T.D. 5,580 ft.; 7-in. csg. 5,580 ft.
Humble O. & R. Co. No. 3 Marshall, A. Sisneros Sur. T.D. 5,487 ft.; 5½-in. csg. I.P. 93 B.P.D.; ¼-in. ck.
Humble O. & R. Co. No. 4 H. T. Marshall, A. Sisneros Sur. R.U.
Humble O. & R. Co. No. 16-B P. H. Welder, A. Sisneros Sur. Drlg. sh. 4,200 ft.
Humble O. & R. Co. No. 19-A Welder, J. M. Rios Sur. Cg. sh. 5,412 ft.
Magnolia Pet. Co. No. 2 O. M. Lander, J. E. Galban Sur. Cg. sdy. sh. 5,437 ft.
Normandale Oil Co. No. 7 J. G. Cook, A. Sisneros Sur. Drlg. sh. 5,315 ft.
Portilla Drlg. Co. No. 9-C P. H. Welder, J. M. Rios Sur. T.D. 5,481 ft.; 5-in. csg. 5,485 ft.
Sinclair Prairie Oil Co. No. 4 W. H. Bennett, A. Sisneros Sur. Drlg. sh. 3,100 ft.
Sun Oil Co. No. 2 W. N. Coffey, J. Galban Sur. Cg. 5,740 ft.

Anahuac—Chambers County

Humble O. & R. Co. No. 11 Broussard, sec. 59, H.&T.C. Sur. T.D. 7,085 ft.; 5½-in. csg. 7,062 ft.; perf. csg. 7,056-67 ft.; tstg.
Humble O. & R. Co. No. 14 Johnson, sec. 47, H.&T.C. Sur. T.D. 7,025 ft.; 5½-in. csg. 7,118 ft.; failed to flow; pulling screen to W.O.
Humble O. & R. Co. No. 10 Zappe, sec. 51, H.&T.C. Sur. 9⅝-in. csg. 1,023 ft.; T.D. 6,586 ft.; fsg.

Cotton Lake—Chambers County

Humble O. & R. Co. No. 1 Casey, S. Barrow Sur. Drlg. sh. 1,237 ft.
Joe Ludin et al No. 1 Lawrence, Solomon Barrrow Sur. 10¾-in. csg. 541 ft.

Seabreeze—Chambers County

Sun Oil Co. No. 3 Acorn, H.T.&B. Sur. 103. 13⅜-in. csg. 1,393 ft.; T.D. 8,494 ft.; S.D.
Sun Oil Co. No. 1 Jackson, Yarbo Sur. Cg. sd.&sh. 8,780 ft.

Turtle Bay—Chambers County

Stanolind No. 4-A Middleton, S. Burney Sur. T.D. 6,615 ft.; comp. as gas well.
Stanolind O. & G. Co. No. 5 Middleton, M. A. Carroll Sur. 10¾-in. csg. 1,185 ft.; T.D. 6,598 ft.; 7-in. csg. 6,590 ft.; I.P. 562 B.P.D.; 24/64-in. ck.
Stanolind O. & G. Co. No. 1 Morrisey, M. A. Carroll Sur. T.D. 6,625 ft.; 7-in. csg. 6,610 ft.; R.U. to pump.
Stanolind O. & G. Co. No. 1 Silva, S. Burney Sur. 10¾-in. csg. 1,188 ft.; T.D. 6,600 ft.; 7-in. csg. 6,584 ft.; comp.; no gauge.

Orchard—Fort Bend County

Gulf Oil Corp. No. 53 Moore, J. Frazier Sur. Drlg. sh. 5,217 ft.
Gulf Oil Corp. No. 55 J. M. Moore, J. Frazier Sur. R.U.

Dickinson—Galveston County

Atlantic Ref. Co. No. 2 Anderson, W. G Banks Sur. 10¾-in. csg. 1,901 ft.; T.D. 8,140 ft.; run csg.
Atlantic Ref. Co. No. 4 Sealy Hutchins, P. G. Merritt Sur. R.U.
Bennett-Kenyon Oil Co. No. 2 B. Schroeder, W. G. Banks Sur. T.D. 8,143 ft.; 6⅝-in. csg. 8,110 ft.
Humble O. & R. Co. No. 4-A Maco Stewart, W. K. Wilson Sur. Core sd. 8,940 ft.
Ken-Ben Oil Co. No. 5 Stewart, W. K. Wilson Sur. T.D. 8,790 ft.; 6⅝-in. csg. 8,790 ft.
Pure Oil Co. No. 2-A Sealy Hutchins, P. G. Merritt Sur. R.U.
Pure Oil Co. No. 3-B J. W. Shelor, W. G. Banks Sur. 10¾-in. csg. 1,833 ft.; T.D. 8,125 ft.; run csg.
Stanolind O. & G. Co. No. 3 Damiani, W. K. Wilson Sur. T.D. 8,472 ft.; P.B.; T.D. 8,156 ft.; P.B. and sdtrkd.; drlg. sh. 8,180 ft.
Turman Oil Co. No. 3 Stewart, W. K. Wilson Sur. T.D. 8,941 ft.; run csg.

High Island—Galveston County

Stanolind O. & G. Co. No. 10 B.&O., M. Dunman Sur. 10¾-in. csg. 1,315 ft.; drlg. sh. 5,322 ft.
Stanolind O. & G. Co. No. 63 Cade, M. Dunman Sur. 10¾-in. csg. 1,311 ft.; W. O.C.
Stanolind O. & G. Co. No. 1 C. E. Smith M. Dunman Sur. T.D. 6,399 ft.; 7-in. csg. 5,180 ft.; pulling screen and lnr.

Hitchcock—Galveston County

N. W. Hunter No. 1 Stewart Title Guaranty Co., J. D. Moore Sur. R.U.
Merit Oil Co. No. 1 Stewart, J. B. Moore Sur. R.U.

Silsbee—Hardin County

Republic Prod. Co.-Houston Oil Co. No. 22 Brooks, G. W. Brooks Sur. T.D. 6,920 ft.; 7-in. csg. 6,915 ft.; swbg.
Republic Prod. Co.-Houston Oil Co. No. 23 Brooks, G. W. Brooks Sur. Spdd.

Clinton—Harris County

Stanolind O. & G. Co. No. 1 A. S. Moody, Reels & Trobough Sur. 10¾-in. csg. 2,522 ft.; T.D. 4,600 ft.; 5¾-in. csg. 3,650 ft.; perf. csg. 3,596-3,600 ft.; I.P. 2,130,000 ft. gas per day; ¼-in. ck.; T.P. 1,360 lbs.; C.P. 1,390 lbs.

Friendswood—Harris County

Humble O. & R. Co. No. 2 Beamer, T. Choate Sur. Drlg. sh. 5,359 ft.
V. H. Borsodi No. 1 Berlowitz, Blk. 3, T. Choate Sur. T.D. 6,117 ft.; recvd. 2,000 ft. of oil, some brackish wtr.; run csg. to test.
Humble O. & R. Co. No. 1 Kiesling, T. Choate Sur. R.U.

Fairbanks—Harris County

Amerada Pet. Corp. No. 1 F. A. Carpenter, F. Fry Sur. No. 267. T.D. 6,830 ft.; oil sd.; run csg.
Hamill and Smith No. 1 Dopsaluf, W.C. R.R., Blk. 1, sec. 4. Drlg. sh. 6,940 ft.

Humble—Harris County

John Deering No. 1 Wm. Lee, E. Rhule Sur., 5,000-ft. test. T.D. 5,440 ft.; fsg.

Mykawa—Harris County

H. C. Cockburn and Hargrove No. 1 Minnetex, Wm. Lovett Sur. Drlg. sh. 4,000 ft.

South Houston—Harris County

Stanolind O. & G. Co. No. 2 H. L. Bennett et al, Unit 13, H.T.&B. Sur. No. 6. T.D. 4,068 ft.; 5¾-in. csg. 4,051 ft.; P.B. 3,900 ft.; pulling csg.
Stanolind O. & G. Co. No. 2 H. G. Funk, Callahan and Vince Sur. 9⅝-in. csg. 1,479 ft.; T.D. 4,825 ft.; 5¾-in. csg. 4,797 ft.; I.P. 159 B.P.D.; ¼-in. ck.

Tomball—Harris County

Humble O. & R. Co.-Magnolia Pet. Co. No. 5-B Hobs. T.D. 5,609 ft.; I.P. 556 B.P.D.; ¼-in. ck.
Humble O. & R. Co. No. 1 J. M. Walsh, J. Pruitt Sur. T.D. 5,568 ft.; 5½-in. csg. 5,563 ft.
Humble O. & R. Co.-Magnolia Pet. Co. No. 1-C Kobs, J. H. Edwards Sur. R.U.
Humble O. & R. Co. No. 1 R. Riesenberg, J. Pruitt Sur. R.U.
Mabee Drlg. Co. No. 3 W. Baker, J. House Sur. T.D. 5,589 ft.; W.O.C.
Texas Co. No. 4 Sam Lewis, J. Pruitt Sur. T.D. 5,552 ft.; P.B. 2,850 ft.; drlg. sh.& L. 3,099 ft.

Edna—Jackson County

Steinberger Pet. Corp. No. 2 Druschell, Rodriguez Sur. 7-in. csg. 4,821 ft.; prep. to perf. and test; comp. for wet gasser.

Amelia—Jefferson County

Humble O. & R. Co. No. 9 T. H. Crook, C. Williams Sur. Drk.
Humble O. & R. Co. No. 10 Crook, C. Williams Sur. R.U.
Humble O. & R. Co. No. 5 Fitzgerald, C. Williams Sur. Loc.
Humble O. & R. Co. No. 1 S. L. Guinn, C. Williams Sur. R.U.
Humble O. & R. Co. No. 12 Guinn, C. Williams Sur. Drk.
Humble O. & R. Co. No. 11 J. H. Phelan, C. Williams Sur. Drk.
Humble O. & R. Co. No. 12 Phelan, C. Williams Sur. Drk.
Humble O. & R. Co. No. 2-C Pinchback, C. Williams Sur. R.U.
Humble O. & R. Co. No. 15 Tyrell-Combest, A. Savery Sur. T.D. 6,779 ft.; 5½-in. csg. 6,776 ft.; I.P. 611 B.P.D.; ¾-in. ck.
Glenn H. McCarthy No. 5-A Longe, H. Williams Sur. 10¾-in. csg. 1,120 ft.; T.D. 5,891 ft.; I.P. 24 B.P.H.; ¼-in. ck.
Glenn H. McCarthy No. 3-B Longe, H. Williams Sur. R.U.
Stanolind O. & G. Co. No. 6 McCormick, H. Williams Sur. 10¾-in. 1,176 ft.; T.D. 5,882 ft.; run 7-in. csg.
Stanolind O. & G. Co. No. 7 Sargl, H. Williams Sur. T.D. 6,435 ft.; 7-in. csg. 6,016 ft.; perf. csg. 5,980-84 ft.; P.B. 5,961 ft.; W.O.C.
Sun Oil Co. No. 2 Gailey, A. Houston Sur T.D. 5,902 ft.; P.B. 5,894 ft.; swbg. S.W. and oil.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 2 May Fitzhugh, Wm. McFadden Sur. T.D. 4,047 ft.; 10¾-in. csg. 4,040 ft.; drlg. sh. 4,587 ft.
Stanolind O. & G. Co. No. 3 Sargl, H. Williams Sur. T.D. 6,435 ft.; 7-in. csg. 6,016 ft.; perf. csg. 5,980-84 ft.; P.B. 5,961 ft.; W.O.C.

Fannett—Jefferson County

Gulf Oil Corp. No. 1 Junker-Spencer, W. H. Smith Sur. Drlg. sd.&L. 5,367 ft.

LaBelle—Jefferson County

Sun Oil Co. No. 1 John Ward, 933 ft. S of No. 2 Broussard, Wm. Burton Sur 18⅝-in. csg. 109 ft.; 9⅝-in. csg. 8,538 ft.; 7-in. csg. 9,951 ft.; core. sh. 10,147 ft.

Nome—Jefferson County

Shell Pet. Corp. No. 4-A Texas Public Service Co., W. H. Aldridge Sur. R.U. as relief well.
Sun Oil Co. No. 2 Tindall, A. Horton Sur. T.D. 107 ft.
Sun Oil Co. No. 5 Long, J. Blair Sur. T.D 6,045 ft.; I.P. 233 B.P.D.; 24/64-in. ck.
Sun Oil Co. No. 7 Long, Blair Sur. 10¾-in. csg. 1,068 ft.

North Cheek—Jefferson County

Magnolia Pet. Co. No. 2 Phelan, S. Stevens Sur. T.D. 8,682 ft.; 7-in. csg. 8,660 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 1 Neville, J. Pleasants Sur. Drlg. sh. 5,987 ft.

Hankamer—Liberty County

Gulf Oil Co. No. 25 E. W. Boyt, Amos Allen Sur. Drlg. sh. 6,837 ft.

Hardin—Liberty County

Jack Frazier No. 1-A Lynott & Buffam, J. Robeson Sur. 10¾-in. csg. 1,078 ft.; T.D. 7,792 ft.; P.B. 6,000 ft.; to sdtrk.
Shell Pet. Corp. No. 1 Cochran, H. B Johnson Sur. Drlg. sh.&L. 7,307 ft.
Strake Pet. Co. No. 1 W. T. Finley, A. B. Hardin Sur. 10¾-in. csg. 1,200 ft.; drlg. plug.
Woodley Pet. Co. No. 2 W. McMurtay, H. B. Johnston Sur. P.B. 4,270 ft.; lost whipstock; abd.
Woodley Pet. Co. No. 3-B McMurty, H. B. Johnson Sur. R.U.

Hull—Liberty County

Houston Prod. Co. No. 3 J. C. Baldwin, J. Devore Sur. Drlg. 2,112 ft.
Republic-Houston Oil Co. No. 163 Dolbear, J. Devore Sur. T.D. 2,460 ft.; I.P. 225 B.P.D.; pmpg.
Texas Co. No. 8 Barrow fee, J. Devore Sur. R.U.

South Call—Liberty County

Houston Oil Co.-Republic Prod. Co. No. 2 Peavy-Moore Lbr. Co., sec. 42, H.&T.C. Sur. R.U.

Bay City—Matagorda County

Hamman Expl. Co. No. 1 H. E. Thompson, Hall Sur. Core sh.&sd. 7,990 ft.

Buckeye—Matagorda County

United North & South Dev. Co., B. Cotton Sur. R.U.
United North & South Development Co No. 1 G.B.M., Cotton Lge. T.D. 8,667 ft.; 7-in. csg. 8,667 ft.; perfg. csg. 7,798-7,805 ft.; tstd. S.W.; cmtd. off perf.; W.O.C.

Palacios—Matagorda County

Atlantic-McCarthy No. 3 Foley Ld. Co., L. Goodwin Sur. Drk.
Atlantic-McCarthy No. 2 Palacios State Bank, L. Goodwin Sur. Drlg. sh.&L. 1,716 ft.
Glenn McCarthy No. 2 Foley, L. Goodwin Sur. T.D. 8,590 ft.; rmg.
Glenn McCarthy No. 1 W. M. Rohls, sec 10, L. Goodwin Sur. T.D. 8,843 ft.; stuck D.S. while washing over.
Sun Oil Co. No. 1 Bay Shore Farms, Lewis Goodwin Sur. Core sh. 9,470 ft.

Orange—Orange County

Tillery & Ryan No. 1 Chesson, Wm. Dyson Sur. 10¾-in. csg. 1,180 ft.

Port Neches—Orange County

Texas Co. No. 6 W. H. Starks, W. E. Hall Sur. Dredge canal.

Livingston—Polk County

Gem Oil Co. No. 5 Kavanaugh, A. Viesca Sur. R.U.

Segno—Polk County

Gulf Oil Corp. No. 8 Wing, sec. 14, I.&G N. Sur. T.D. 5,996 ft.; rmg.
Rajo Oil Co. No. 2 Wing, I.&G.N. Sur., sec. 15. R.U.

Refugio—Refugio County

Houston Oil Co. No. 34 Rooke, Thos. Mullen Sur. Comp.; no gauge.
South Oil Corp. No. 10 Heard, Refugio townsite. Comp.; no gauge.

Tomoconnor—Refugio County

Hewitt and Daugherty No. 55 O'Connor O'Connor-Swisher Sur. T.D. 5,951 ft.; I.P. 1,850 B.P.D.; ¼-in. ck.
Hewitt and Daugherty No. 56 O'Connor, O'Connor-Swisher Sur. Comp.; no ga.

Spurger—Tyler County

Republic-Houston Oil Co. No. 5 Hurd fee, N. Hurd Lge. Drlg. sh.&L. 3,347 ft.

Keeran—Victoria County

Gulf Oil Corp. No. 12 G. R. Keeran Est. R.U.

Placedo—Victoria County

Barnsdall Oil Co. No. 24 Pickering and Roos, S.A.&M.G. Sur. T.D. 4,767 ft.; I.P. 57 bbls. in 5 hrs.; ⅞-in. ck.
Barnsdall Oil Co. No. 25 Pickering and Roos, S.A.&M.G. Sur. No. 5. T.D. 4,762 ft.; I.P. 49 bbls. 5 hrs.; ⅞-in. ck.
Westgate Oil Co. et al No. 7 Mikeska, S. A.&M.G. Sur., Lot 74. Drlg. sh. 850 ft.

Tellener—Victoria County

Gulf Oil Corp. No. 1 Mahon and Buhler, W. C. Carroll Sur. Drlg. sdy. sh. 4,515 ft.
Magnolia Pet. Co. No. 2 Book, T.&N.O. Sur. T.D. 4,832 ft.; abd.

Clay Creek—Washington County

Sun Oil Co. No. 7 Droeger, J. F. Perry Sur. Drlg. sh. 4,239 ft.

Five Corners—Wharton County

Texas Co. No. 9-B Pierce, J. Caldwell Sur 10¾-in. csg. 1,133 ft.; T.D. 5,555 ft.; 5-in. csg. 5,534 ft.

Magnet—Wharton County

Atlantic Ref. Co. No. 4-B H. C. Cockburn, Smith and McKenzie Sur. 10¾-in. csg. 1,363 ft.; T.D. 5,542 ft.; set retainer W.O.C.
Humble O. & R. Co. No. 2 Cockburn, Smith & McKenzie Sur. T.D. 5,543 ft.; 7-in. csg. 5,534 ft.; perf. csg. 5,525-30 ft.
Peyton Bros. No. 1 Gish, Lot 2, Blk. 84, M.L.T. Co. Subd., Smith & McKenzie Sur. 10¾-in. csg. 1,112 ft.; T.D. 5,529 ft.; 7-in. csg. 5,529 ft.; pulling screen and lnr.
Texas Crusader Oil Co. No. 2 H. C. Cockburn, Smith & McKenzie Sur. 10¾-in. csg. 1,155 ft.

Pickett Ridge—Wharton County

Texas-Crusader Oil Co. No. 2 J. F. Kubella et al, G. C. Gifford Sur. 10¾-in. csg. 1,118 ft.; drlg. 2,631 ft.
Texas Co. No. 33-A Pierce Est., G.B.&N. Sur. No. 4; 9,000-ft. test. T.D. 8,408 ft.; P.B. and sdtrkd. 7,458-92 ft.; T.D. 8,408 ft.; P.B. and sdtrkd. 8,353 ft.; T.D. 8,888 ft.; abd.

Withers—Wharton County

Texas Co. No. 31-C Pierce, Wm. Pettus Sur. T.D. 5,557 ft.; 7-in. csg. 5,552 ft sdtrkd.; drld. cmt. to 5,539 ft.; I.P. 200 bbls. net oil per day; 12/64-in. ck.
Texas Co. No. 36-C Pierce Est., Wm. Pettus Sur. T.D. 5,553 ft.; 7-in. csg. 5,547 ft.; fsg. for tbg.
Texas Co. No. 38-C Pierce, J. Caldwell Sur. R.U.
Texas Co. No. 2 A. C. Thompson, Wm. Pettus Sur. Drlg. sh.&L. 5,125 ft.

GULF COAST WILDCATS

Chambers County

Merit Oil Co. No. 1 T. and M. Wright, C. Smith Sur. 10¾-in. csg. 1,302 ft.; T.D. 6,456 ft.; 10-min. D.S.T. 6,441-56 ft. showed 25 lbs. press.; 210 ft. of oil and 1,160 ft. of S.W.

Fort Bend County

Humble O. & R. Co. No. 1 Schultze, R. Hodge Sur. T.D. 1,010 ft.; T.D. 4,824 ft.; abd.
Research, Inc., No. 1 Moore, S. Kennedy Sur. T.D. 7,177 ft.; fsg.
Windward Oil Co. No. 1 P. W. Sims, sec. 1, H.&T.C. Sur. 10¾-in. csg. 995 ft.; drlg. sh. 3,600 ft.

Galveston County

R. R. Gray et al No. 1 Eldman, Anthony Hatch Sur. Bldg. drk.

Hardin County

Coronado Oil Co. No. 1 Ryan, J. G. Bell Sur. 10¾-in. csg. 480 ft.; T.D. 5,250 ft.; abd.
Humble O. & R. Co. No. 1 Shone, S. R. Fisher Sur. T.D. 630 ft.; W.O.C.

Harris County

Medford and Burke No. 1 W. A. and O. C. Pruitt, Gilbert Brooks Sur. R.U.
Texas Gulf Prod. Co. No. 1 H. J. Moore, sec. 18, W.C.R.R. Sur. T.D. 7,443 ft.; abd.

Jefferson County

Shell Pet. Corp. No. 1 W. P. McFaddin, S. A. Pace Sur. No. 2. Dredge canal.

Liberty County

O. C. Garvey No. 1 A. C. Weaver, T. Devers Sur. 10¾-in. csg. 440 ft.; T.D. 5,985 ft.; abd.

Humble O. & R. Co. No. 2 Sabine Tram, Malinda Whittington Sur. (Devers area). Drlg. sh. 6,896 ft.

Matagorda County

Continental Oil Co. No. 2 Hawkins Est., D. McCarty Sur. Drlg. sh. 8,967 ft.

Newton County

Houston Oil Co.-Republic Prod. Co. No. 1 Peavy-Moore, sec. 42, H.&T.C. Sur. Rec. 180 ft. P.L.O.; 540 ft. of oily mud on D.S.T. 6,775-6,927 ft.; P.B. 6,987 ft.; 7-in. csg. 6,987 ft.; perf. csg. 6,908-18 ft. with 20 holes.

Refugio County

Hogan Oil Co. No. 1 Kelley, M. & A. Roache Sur. Drlg. sh. 202 ft.

San Jacinto County

J. G. Mayo et al No. 1 Gibbs Bros., L. E. Mrequez Sur. T.D. 1,300 ft.; gas sd.; cg. ahead.

Tyler County

Thompson Drlg. Co. and J. C. Bonham, Emily Smith Sur. Drlg. sh. and bldrs. 763 ft.

Victoria County

Wallace Sollores et al No. 1 Etta Terrell, J. M. Galban Sur. Cg. 4,700 ft.

Stanolind O. & G. Co. No. 1 Henderson & Pickering, E. Benavides Sur. Drlg. sh. 5,800 ft.

Trinity County

Gossage-Green and Thompson No. 1 R. E. Thompson, J. A. Hickey Sur. Drk.

Washington County

K. D. Harrison and C. E. Starr No. 1 Charles and Wm. Ellerman, Wm. Bridges Lge. 13-in. csg. 290 ft.

Walker County

W. B. Gossage et al No. 1 Carey Ld. & Dev. Co., D. McDonald Sur. S.D. 2,220 ft.

Wharton County

Buch & Holt No. 1 Kaener, F. C. Reynolds Sur. 10¾-in. csg. 620 ft.

S. W. TEXAS WILDCATS

Aransas County

Barnsdall Oil Co. No. 2 Kate Edwards, 330 ft. S line, Lot 85, 660 ft. SW No Wm. Lewis Sur. T.D. 9,785 ft.; set 7-in. csg. in sdtrkd. hole 8,167 ft.; perf. 8,017-23 ft.; 55-min. D.S.T. flwd. after 26 min.; rec. 8,000 ft. S.W. with dist. odor; recmtd. and P.B. 7,500 ft.; perf. 7,502-30 ft.; comp.; 70 B.P.D. dist., and 5,000,000 ft. gas on ¾-in. ck.; T.P. 1,300 lbs.; C.P. 2,700 lbs.

Atascosa County

Brown & Bell No. 1 Atkins, 920-ac. tr., Sur. 3. Drlg. 3,106 ft.

L. W. Steiren No. 1 Crawford, 4 mi. W of Anchorage. M.I.M.

Bastrop County

J. W. Bibb No. 1 Lentz, F. Wilkenson Sur. Drlg. sh. 916 ft.

Hantho-Nelson, Inc., No. 1 Litton, 71-ac. tr., Cedar Ck. Community. Top Edw. 2,515½ ft.; T.D. 2,135 ft.; P.B. 2,138 ft.; treating.

Hantho-Nelson No. 2 Litton, 660 ft. W of No. 1, 75-ac. tr., Cedar Ck. Community. M.I.M.

Harvey & Henderson No. 1 Erhard, 175-ac. tr., Knight & White Surs. Spd.

Marts & Beavens No. 1 Lackey, Joshua Gray Sur. Set surf. csg.; W.O.C.

R. Olson No. 1 Murchison, A. Litton Sur. Set csg. 1,828 ft.; T.D. 1,928 ft.; comp. on pmp.; est. 100 B.P.D.; went dead; D.D. 2,065 ft.

Texas Northern Oil Co. No. 1 Barton, J. Rogers Sur. S.D. 2,927 ft.

Bee County

Dougherty No. 3 Hicks, Blk. 39, Uranga Gr. R.U.

Bell County

W. H. Vernor No. 1 McQueen, 9 mi. S of Belton. Drlg. 2,009 ft.

Bexar County

Oil Country Pipe & Supply Co. No. 1 Weber, Blk. 407. D.&A. 2,019 ft.

Brooks County

Standard Oil Co. of Texas No. 2 Mestina, Lse. 2. T.D. 2,400 ft.; drlg. plugs.

Caldwell County

B. C. Armstrong No. 1 Bell, S. Seal Sur. Drld. plugs 2,465 ft.; stdg. with 1,100 ft. fluid in hole.

Chisum et al No. 1 Lane, 91-ac. tr., Lockhart Sur. Set csg. 45 ft.; D.&A. 2,189 ft.

Lanning & Coffield No. 1 Trammell, 150 ft. N line, 750 ft. E line lse., Guadalupe College Sur. To P.B.; S.D.

Taylor Ref. Co. No. 1 Stacey, E. Tyson Sur. No. 21. D.&A. 1,384 ft.

Trio Oil Co. No. 1 Wille, Darst Sur. Drlg. 2,655 ft.

L. H. Wilson No. 1 Wright, J. Roberts Sur. S.D. 2,050 ft.

Comal County

J. R. Yates No. 2 Heidrich, Heidrich ranch. Drlg. 941 ft.

Dimmitt County

Texas & Maryland Corp. No. 1 McKnight, Blk. 13, sec. 23. S.D.; repairs 2,009 ft.

H. F. Wilcox No. 3 Light ranch, 330 ft. N and W lines, sec. 113, I.&G.N.R.R. Sur., Blk. A. Drlg. 4,749 ft.

H. F. Wilcox O. & G. Co. No. 4 Light ranch, Blk. 9, sec. 97. Spd.

Duval County

Hougen, Tr., No. 1 Patton, Sur. 148. D.&A. 3,004 ft.

Liberty Oil Co. No. 1 State, Sur. 216. T.D. 1,555 ft.; S.D.

Magnolia Pet. Co. No. 1 D.C.R.C., Sur. 259. D.&A. 4,300 ft.

Magnolia Pet. Co. No. 16 Herbst, Sur. 65. R.U.

Magnolia Pet. Co. No. 1 Ruiz, Sur. 190. R.U.

Navarro Oil Co. No. 1 Bennett, Blk. 33, Navarro Subd., Bennett ranch. T.D. 2,630 ft.; S.D.

Penn-Palangana Oil Co. No. 2 Schallert, Sur. 239. Drlg. 2,813 ft.

H. J. Porter No. 1 Sevier, Palo Blanquito Gr. Cg. sh. 5,237 ft.

H. J. Porter et al No. 1 Montemayor, Las Anacus Gr. Cg. sd. 4,742 ft.

V. G. Schimmel No. 3 Hagist, Sur. 4. Tstd. gas 1,949-62 ft.; D.&A. 2,606 ft.

Slaughter & Hugle No. 1 Hunter Est., 80-ac. tr., sec. 515. Drlg. 1,088 ft.

E. R. Thomas Est. No. 1 Pena, J. A. Garcia Sur. No. 8. Drlg. 3,626 ft.

Tsesmalis & Shipman No. 2 Canales, C SE¼, Lot 75. D.&A. 4,005 ft.

Woodley Pet. Co. No. 1 Parr, 100-ac. tr., San Andres Gr. Sd. 4,795-4,810 ft.; rocked in with 250 lbs. on tbg.; flwd. 6 B.P.H. P.L.O.; 15/64-in. ck.; C.P. 945 lbs.; T.P. 125 lbs.; comp.; 112 B.P.D.; jetting.

Edwards County

Dan Auld No. 1 Henderson, sec. 46, Blk. "E." M.I.M.

Amon G. Carter No. 1 Sweeten, SE¼, Blk. 2, Sur. 49. Drlg. 5,117 ft.

Frio County

Pagenkopf & Jamieson No. 1 Houston Est., 2,254-ac. tr., J. Figuerroa Sur. Drlg. 2,066 ft.

Guadalupe County

Elimag Oil Co. No. 1 Hardiman, Dikes Sur. Set surf. csg. W.O.C.

Mason Altgelt No. 1 Schubert, Esnaurizer Sur. T.D. 1,081 ft.; P.B. 890 ft.

Moon O. & G. Co. No. 1 Penshorn, Vincente Duran Sur. S.D. 704 ft.

Hidalgo County

Y. & B. Oil Co. No. 1 Waite, Tr. 382, Los Jidos Gr. Drlg. 3,783 ft.

Jim Hogg County

Henry M. Brown No. 1 Gutierrez, sec. 22, Sh. 4, El Peyote Gr. Drlg. 2,493 ft.

Jim Wells County

H. M. Hill et al No. 1 Kuether, Lots 70 and 75, sec. 52, Haldeman Subd. Spdg.

ac. tr., Los Jaboncillos Gr. Sd. S.G. 6,488-6,503 ft.; D.S.T. 6,488-6,503 ft.; rec. 60 ft. dist.; 1,000 lbs. W.P. 10-min.; took short core; well blew out and burned; S.I. and killed; comp.; cleaned hole; cg. 6,546 ft.

Karnes County

DeGraff & Reele No. 1 Cochran, McConnel Lge. Drlg. 1,474 ft.

Ivan Howard No. 1 Moczygemba, Erasmo Seguin 5, Leage Gr. Drlg. 1,843 ft.

Kendall County

Landon & Peffley No. 1 Seidensticker, Sur. 257, Chorcon Gr. S.D. 530 ft.

Lee County

Jas. E. Pederson No. 1 Turner, Davis Hudson Sur. S.O.&G. 6,140-80 ft.; sdtrkd. at 4,600 ft. and drld. to 6,132 ft.; S.O.&G.; set csg. 6,021 ft.; acdzg. with 20-bbl. load; when opened well flwd. 20-bbl. head and went dead; swbd. oil and wtr.; acd.; to put on pump.

Live Oak County

Chas. Hanna et al No. 1 Wedding, 200-ac. tr., Haughy Sur. Drlg. sh. 616 ft.

R. P. Holland No. 1 Matkin, Tr. 2433, sec. 46, Floreck Sur. Sd.; S.O.&G. 1,485-89 ft. and 1,496-1,501 ft.; oil stdg. in hole; comp.; 180 B.P.D.; T.D. 1,514 ft.

Loma Oil Co. No. 1 McCurdy, W. J. Turner Sur. No. 71. Drlg. 819 ft.

Marzo Oil Co. No. 1 Alexander, Ayres Sur. Drk.

Petroleum Producers Co. No. 1 Alexander, Nichols ranch, Ayres Sur. M.I.M.

Ranco Oil Corp. No. 1 fee, 660 ft. NW and SW lines, Pointevent Sur. 3. M.I.M.

Standard Oil Co. of Texas No. 1 Nicholson, Thompson Sur. M.I.M.

Unit Pet. Co. No. 1 Nichols, 1,535-ac. tr., S. Ryan Sur. D.&A. 1,467 ft.

Maverick County

Rio Dev. Co. No. 4 State Bank & Trust Co., Sur. 2. Drlg. sh. 620 ft.

Wellington Oil Co. No. 1 Chittam, 330 ft. N line, 2,310 ft. W line, sec. 129, Blk. 7. T.D. 3,287 ft.; tried to blow out while rng. csg.; S.D.

McMullen County

Adams & Lefevre No. 1 Selman, sec. 58, Govt. Wells sd. 2,512-16 ft. and 2,536-40 ft.; D.S.T. 2,509-40 ft.; rec. 1,860 ft. mud cut with oil and brackish wtr; light blow gas; cg. ahead 2,912 ft.

Rowan & Nichols No. 1 Rhodes, NE¼ sec. 18, Seale & Morris Sur. Drlg. 2,411 ft.

Pat Tinney No. 1 Rutherford, Blk. 17, Two Rivers Ranch Subd. S.D. cor. T.D. 305 ft.

Medina County

R. S. Bolling No. 1 McMenemy, Sur. 33⅓. M.I.R.

Nueces County

Camp Prod. Co. No. 1-A Wardner, sec. 18, Stratton Subd. D.S.T. 6,476-82 ft.; rec. 40 ft. dist. in 4½ min.; W.P. 400 lbs.; cg. sd. 6,513 ft.

Seaboard Oil Corp. No. 1 John M. Luby, 466 ft. S and W lines, Blk. 1, Sh. 2, Luby Subd. Loc.

Southern Minerals Corp. No. 2 King, Blk. 6, R. King Farm Lots. R.U.

San Patricio County

Argo Oil Corp. No. 1 Soehnge, 159.66-ac. tr., Blk. 11, Schleicher & Joseph Subd., Delgado Gr. Drlg. 3,763 ft.

Danray Oil Co. No. 1 Davis, Tr. 5, Wm. Boyd Sur. Set csg. 7,117 ft.; W.O.C.

F. P. Schwab No. 1 Smith, Lot A-16, Cubage & Miller Subd., O'Connor ranch. D.S.T. 5,425-36 ft.; rec. 160 ft. oil mud and 900 ft. oily S.W. 9 min.; cg. 6,620 ft.

Waterbury Oil Corp. No. 1 Davis, 107-ac. tr., G. Grober Sur. S.D. 6,508 ft.

Starr County

Calderoni-James-Foliette No. 1 Rodriguez Blk. 6, Sh. 56. Porc. 80. Set 4½-in. csg. 1,483 ft.; T.D. 1,511 ft.; P.B. T.D. 1,495 ft.; swbd. S.W.; S.D.

J. H. Clopton No. 1 Green & Mannin. W.O.; old T.D. 4,620 ft.; D.&A.

Gilcrease Oil Co. No. 1 Kelsey-Bass, 40-ac. tr., sec. 11, Porc. 77. D.&A. 3,267 ft.

Henshaw Bros. & Davis No. 1 Garcia, Tr. 40, Porc. 89. Cg. 2,547 ft.

E. J. Pearl No. 1 de la Garza, Sur. 262. R.U.

Sun Oil Co. No. 1 Guerra, Jose Antonio Guadardo Sur., Porc. 111. Set surf. csg. 100 ft.; W.O.C.

Transwestern Oil Co. and Davenport No. 3 Slick, sec. 527. Cg. 5,618 ft.

Webb County

Adams & LeFevre No. 1 Garcia, Blk. 27, Hughes Subd., Sur. 592. D.S.T. 1,856-66 ft.; rec. 75 ft. fluid, 40% oil in 26 min.; T.D. 1,916 ft.; cg. 2,013 ft.

Boone Bros. No. 1 Frost, Sur. 21. D.&A. 2,262 ft.

N. V. Duncan No. 1 Fort Worth Natl. Bank, Sur. 466, Blk. 6. D.&A. 2,017 ft.

French Oil Corp. No. 1 Benavides, Sur. 704. R.U.

Paul Meaders No. 1 Garcia, Sur. 338. Loc

Randon Oil Co. No. 1 Palmer, Sur. 474. Drlg. 1,317 ft.

Willacy County

French Oil Corp. No. 4 Garcia, Sur. 1121. Drlg. 675 ft.

La Sal Vieja Oil Corp. No. 1 Garcia Ld. & Cattle Co., Tr. 73. M.I.M.

Magnolia Pet. Co. No. 1 Armendiaz, Sh. 4, San Juan de Carricitos Sur. Drlg. 2,165 ft.

Williamson County

Thos. W. Davis, Jr. No. 1 Colman & Davis, Boggus Sur. Drlg. sh. 554 ft.

Katz et al No. 1 Saldivar, Blk. 11, Sur. 657. D.&A. 1,080 ft.

Wilson County

Arnold, Dink, Stone & Haley No. 1 Black, 1,102.3-ac. tr., hrs. of Juan and Simon Arocha Sur. Drlg. sh. 37 ft.

Pat Higgins No. 1 Higgins, Rodriguez Sur. 237. M.I.M.

Zapata County

Eugene Mays No. 1 Flores, Blk. 198, Doty Subd., Charco Redondo Gr. Drlg. 1,973 ft.

Zavalla County

Diamond Halff Oil Co. No. 1 Houston, 200-ac. tr., J. Reynolds Sur. R.U.

G. Hyson No. 1 Byrd, 5,000-ac. tr., sec. 130. Loc.

S. W. TEXAS PROVEN

McCampbell—Aransas-San Patricio Counties

Atlantic Ref. Co. No. 7-C McCampbell, Lot 1, Blk. 41. Set 7-in. csg. 7,138 ft.; washing in.

Atlantic Ref. Co. No. 1-F McCampbell, Blk. 28. Drlg. 6,880 ft.

Atlantic Ref. Co. No. 4-B Murray, Lot 9, Blk. 12. Drlg. 516 ft.

Atlantic Ref. Co. No. 1-B Porterfield, Lot 8, Blk. 10. No report.

Atlantic Ref. Co. No. 2-B Porterfield, Lot 11, Blk. 8. Set csg. 1,488 ft.; W.O.C.

Atlantic Ref. Co. No. 3-B Porterfield, Lot 8, Blk. 11. Drlg. 1,850 ft.

Atlantic Ref. Co. No. 4-B Porterfield, Blk. 10, Lot 10. Drlg. 680 ft.

Atlantic Ref. Co. No. 1-C Porterfield, Lot 8, Blk. 12. Rmg. 7,121 ft.

Buckingham Oil Co. and Tom Graham No. 2-D Porterfield, Lot 11, Blk. 9. Drlg. 750 ft.

Buckingham Oil Co. No. 5-A McCampbell, Lot 4, Blk. 39. O. sd. 6,544-48 ft.; reperf. csg. 6,540-42 ft.

Buckingham Oil Co. No. 12-A McCampbell, Blk. 42. Perf. 7,095-7,119 ft.; S.W. & O.; pkd. to reperf.

Buckingham Oil Co. No. 1-B McCampbell, Lots 13 and 14, Blk. 40. O.W.W.O.; old T.D. 6,557 ft.; fsg.

Buckingham Oil Co. No. 1-C McCampbell, 33.8-ac. tr., Blk. 27. T.D. 7,150 ft.; prep. rework.

Graham & Buckingham Oil Co. No. 1-D Porterfield, Lot 11, Blk. 9. O.&G. sd. 7,087-7,137 ft.; set 7-in. csg. 7,148 ft.; comp.; 458 B.P.D. on ⅛-in. ck.; sd. 7,122-52 ft.; T.D. 7,152 ft.

Landreth Prod. Co. No. 6-A McCampbell, Lot 1, Blk. 40. Drlg. 6,977 ft.

Neill & Peterson No. 1-A McCampbell, Lot 1, Blk. 43. Perf. 7,098-7,108 ft.; comp.; no gauge.

Neill & Peterson No. 2-A McCampbell, Lot 1, Blk. 43. Spdd.

Peach Tree Oil Co. No. 2 Porterfield, Lots 15 and 16, Blk. 10. Sd. O.&G. 7,085-7,132 ft.; set csg.; perf. 7,125-30 ft.; clg.

Rutherford Oil Corp. No. 2 Scrivener, Lot 16, Blk. 11. Drlg. 1,506 ft.

Shasta Oil Co. No. 3 Vaughn, Lot 11, Blk. 10. Cg. 6,846 ft.

Carroll—Bastrop County

Nelson Puett No. 7 Carroll Est., 535.75-ac. tr., A. Mays Sur. Drlg. Serp. 2,184 ft.

Plummer—Bee County

W. C. McBride, Inc., No. 3 Schneider, Sur. 3. Set 5½-in. csg. 3,050½ ft.; comp.; 170 B.P.D.; ¼-in. ck.

West Tuleta—Bee County

Salt Dome Oil Co. No. 3 Tuleta Merchantile Co., SW¼, sec. 10, Wragley Subd., Uranga Gr. Jetting; T.D. 3,079 ft.; tstg.

Gas Ridge—Bexar County

W. H. Kennon No. 1 Oliver. T.D. 3,461 ft.; pulled csg. and ran el. sur.

Von Ormy—Bexar County

Roger Putnam No. 8 Wtex, J. S. Simpson Sur. Comp. 4 B.P.D.; pmp.; T.D. 675 ft.

Alta Mesa—Brooks County

Standard Oil Co. of Texas No. 1 Mestina, Lse. No. 1. O.W.W.O.; old T.D. 3,588 ft.; T.D. 3,966 ft.; W.O.C.; squeeze job.

Standard of Texas No. 5 Mestina, Lease No. 1. 7-in. csg. set 3,220 ft.; T.D. 5,505 ft.; perf. 4,513-20 ft.; R.U. to pull tbg. and perf.

Standard Oil Co. of Tex. No. 9 Mestina Lse. No. 1, La Mestina and Gonzalena Sur. Set surf. csg. 1,350 ft.; W.O.C.

Alta Verde—Brooks County

Bishop & Woods No. 1 Maupin, Sur. 311. Drlg. sh. 1,893 ft.

Dick Young No. 5 Singer, Blk. 12, Sur. 312 (W.O.). T.D. 1,810 ft.; S.D.

Branyon—Caldwell County

Adams & Richards No. 4 Flowers, J. Neill Sur. Comp.; 75 B.P.D.; pmp.; T.C. 1,968 ft.; top Buda 2,182 ft.; T.D. 2,210 ft.

B. & T. Pet. Co. No. 1 Magee, J. A. Neill Sur. Completing; T.D. 2,236 ft.; R.U. to pmp.

B. & T. Pet. Co. No. 2 Magee, J. A. Neill Sur. Drlg. 1,451 ft.

Cargill et al No. 1 Patton, J. R. Miller Sur. T.D. ch. 2,082 ft.; T.C. 1,910 ft.; set 6⅝-in. csg. 1,900 ft.; comp.; 3 B.P.D.

Gem Oil Co. No. 1 Branyon, Jarmon Sur. D.&A. 2,385 ft.

Johnson Drlg. Co. No. 1 Lockhart State Bank, J. Roe Sur. Drlg. 1,983 ft.

Lincoln Pet. Co. No. 8 Branyon, J. R. Miller Sur. T.D. 2,340 ft.; comp.; no ga.

Mar-Jon Oil Co. No. 3 Fulps, J. Neill Sur. Drlg. sh. 542 ft.

Martell Pet. Co. No 2. Clark, J. R. Miller Sur. Drlg. 1,815 ft.

Martell Pet. Co. No. 1 Young, J. R. Miller Sur. T.D. 2,342 ft.; pmpg. oil and sulf. to P.B. and perf.

Martell Pet. Co. No. 2 Young, J. R. Miller Sur. Drlg. 516 ft.

Potter P. L. Co. No. 3 McCrory, J. Neill Sur. Drlg. 513 ft.

Second National Oil Co. No. 1 White. R.U. to pmp. 2,203 ft.

Taylor Ref. Co. No. 6-B Branyon, D. Cooper Sur. R.U.

Universal O. & G. Co. No. 2 Cailliham, Miller Sur. Drlg. 2,411 ft.

Wm. Vaughy No. 7 Flowers, J. A. Neill Sur. T.D. 1,897 ft.; set 7-in. csg. 1,895 ft.; W.O.C.

Buchanan—Caldwell County

Fred J. Adams No. 2 Dale, Wm. Spillars Sur. D.&A. 2,290 ft.

Carter et al No. 2 Brown, Cannon Sur. Set csg. 1,990 ft.; comp.; 50 B.P.D. on pmp.; T.C. 2,023 ft.

Edwill Oil Co. No. 4 Browne, Chas. M. Cannon Sur. R.U.

McAlester Fuel Oil Co. No. 2 Miears, Chas. M. Cannon Sur. Set csg. 1,942 ft.; W.O.C.

L. G. Priest No. 1 Chambless, Goodman Sur. T.D. Edw. 2,645 ft.; S.D.

Dale—Caldwell County

Ogden & Reed No. 2 Lackey, S. Damon Sur. T.D. 2,705 ft.; P.B. 2,300 ft.; W.O.P.

Dunlap—Caldwell County

Chas. Schreiner No. 1 Moody, Seal Sur. S.D.; T.D. 2,313 ft.

Larremore—Caldwell County

Spokane O. & G. Co. and Okla. O. & G. Co. No. 3 Starkey, C. Crenshaw Sur. Drlg. 886 ft.

Salt Flat—Caldwell County

Pummel & Brady No. 1 Jackson, S. Morris Sur. Drlg. 1,137 ft.

Elimag Oil Co. No. 1 Pope, J. P. Rains Sur. M.I.M.

Hantho-Nelson, Inc., No. 1 New, James Hinds Sur. Drlg. 316 ft.

Benavides—Duval County

Argo Oil Co. No. 8 Carillo, sec. 9, Sweden Farm Lots. Drlg. 2,721 ft.

Arkansas Fuel Oil Co. No. 6 Rossi, Santos Flores Sur. Drlg. 4,251 ft.

Benedum & Trees Oil Co. No. 6 Puig, San Andres Gr. Sd. 4,774-83 ft.; set csg.; comp.; est. 100 B.P.D.

Benedum & Trees Oil Co. No. 7 Puig, San Andres Gr. Set surf. csg. 959 ft.; W.O.C.

Oil Man's Calendar

September—October

30-Oct. 1—Tulsa, S.A.E. Fuels and Lubricants Regional Meeting.

October

4-5—Chicago, Ill., National Lubricating Grease Institute, fifth annual convention, Blackstone Hotel.
5—Kilgore, Tex., East Texas Chapter, American Petroleum Institute.
6-7—Cleveland, Ohio, Ohio Petroleum Marketers Association, Hotel Carter.
7-8—Oklahoma City, fall meeting of Petroleum Division of A.I.M.E., Hotel Biltmore.
7-9—Los Angeles, Calif., S.A.E. National Aircraft Production Meeting, Ambassador Hotel.
11-15—Kansas City, Mo., Twenty-sixth National Safety Congress and Exposition.
11-16—Houston, Tex., Oil-World Exposition.
12-14—Chicago, Ill., National Oil Marketers Association Convention, Stevens Hotel.
14-16—Pittsburgh, Pa., mid-year meeting, American Association of Petroleum Geologists, William Penn Hotel.
14-15—Houston, Tex., Interstate Oil Compact Commission, Rice Hotel.
14-16—Houston, Tex., Independent Petroleum Association of America, annual meeting.
18-22—Atlantic City, N. J., American Welding Society, Eighteenth Annual Meeting and Welding Exposition.
27—Shreveport, La., Louisiana-Arkansas division, Mid-Continent Oil and Gas Association, membership meeting Slattery, Building.
27-28—Indianapolis, Ind., Indiana Independent Petroleum Association, Annual Fall Convention, Hotel Severin.
28—New York, S.A.E. Annual Dinner, Commodore Hotel.
29-30—Dallas, Tex., Mid-Continent Oil and Gas Association of Texas, annual meeting.

October—November

27-Nov. 3—New York, National Automobile Show. Grand Central Palace.

November

8-12—Chicago, American Petroleum Institute, Eighteenth Annual meeting, Stevens Hotel.
16—New York, Oil Trades Association of New York.
19—Tulsa, Mid-Continent Oil and Gas Association membership meeting, Tulsa Club.

December

6—Memphis, Tenn., National Asphalt Congress.
6-11—New York, Exposition of Chemical Industries, Grand Central Palace.
8-10—Flint, Mich., S.A.E. National Production Meeting.
14—Tulsa, annual meeting of directors of Mid-Continent Oil and Gas Association.

1938—March

16-8—New Orleans, twenty-third annual meeting, American Association of Petroleum Geologists, Roosevelt Hotel.

April

17-21—Dallas, Tex., American Chemical Society.

M. Benzaquin No. 1 Flores, sec. 9, Sweden Farm Lots. T.D., lig. 4,805 ft.; S.D.O.
Bridwell Oil Co. No. 3 Anciro, 152-ac. tr., Lot 19, Sweden Farm Lots. Set 7-in. csg. 4,768 ft.; W.O.C.
Frank Gravis Oil Co. No. 4-A Puig, 100-ac. tr., San Andres Gr. T.D. 4,822 ft.; drlg. plugs.
Gravis & Doran No. 5 Puig, 200-ac. tr., San Andres Gr. Set csg. 4,799 ft.; comp.; 98 B.P.D. on ¼-in. ck.
Gravis & Doran No. 6 Puig, San Andres Gr. No. 24. Drlg. 2,057 ft.
Hiawatha Oil Co. No. 3 Parr, San Andres Gr. Set csg. 4,735 ft.; W.O.C.
Navarro Oil Co. No. 1-A Owens, 100-ac. tr., Blk. 19. Drlg. 3,577 ft.
Nordan & Morris No. 1 West, 50-ac. tr., Santos Flores Gr. Perf. 4,770-74 ft.; comp.; gasser; 1,300,000 ft. gas and 13 bbls. oil; ¼-in. ck. T.D. 4,777 ft.
Nordan & Morris No. 2 West, sec. 10, Sweden Farm Lots. R.U.
Parr & Delaney No. 12 Valleo, 150-ac. tr., Lot 24, San Andres Gr. Set csg. 4,794 ft.; T.D. 4,801 ft.; comp.; 176 B.P.D. on 5/36-in. ck.; T.D. 4,803 ft.
Reynosa Oil Co. No. 4 Wilson, 80-ac. tr., sec. 9, Sweden Farm Lots. Drlg. 4,337 ft.
Reynosa Oil Co. No. 5 Wilson, 80-ac. tr., sec. 9, Sweden Farm Lots. Drlg. 3,556 ft.
Russ Pet. Co. No. 6 Farias, Blk. 9, Sweden Farm Lots. Drld. plugs; rng. screen and lnr. to comp.
Russ Pet. Co. No. 7 Farias, Flores Gr. No. 25. Drlg. 4,022 ft.
Russ Pet. Co. No. 1 Rossi, sec. 10, Sweden Farm Lots. Drlg. 3,783 ft.
Standard Oil Co. of Kans. No. 6 Parr, 80 ac. tr., San Andres Gr. Clg. in pits on ⅞-in. ck.
Standard Oil Co. of Kans. No. 2 Southland Life, sec. 2, Santos Flores Gr. Set 7-in. csg. 4,748 ft.; T.D. 4,815 ft.; comp.; 106.54 B.P.D. on ⅞-in. ck.; 300 and 1,000 lbs.
Standard Oil Co. of Kansas No. 9 Rossi, Santos Flores Gr. Cg. 4,763 ft.
Standard Oil Co. of Kansas No. 3 Walstad, 100-ac. tr., Blk. 9, Sweden Farm Lots. Set csg. 4,793 ft.; W.O.C.
Sun Oil Co. No. 1 Barton Est., 1,056.1-ac. tr., Surs. 425, 6 and 24, San Andres Gr. Drlg. 3,217 ft.

Charamousca—Duval County

N. V. Duncan No. 15 Worden-Draught, Sur. 151. Cg. 1,516 ft.

Driscoll—Duval County

Continental Oil Co. No. 18-A Sevier, Sur. 450. Set csg. 3,351 ft.; sd. 3,320-49 ft.; T.D. 3,374 ft.; tstg.

Hoffman—Duval County

Bridwell Oil Co. No. 5 Green, Sur. 118. Oil sd. 2,715-18 ft.; set 7-in. csg. at T.D. 2,718 ft.; comp.; 41 B.P.D. on ¼-in. ck.
Cox & Hamon No. 20 Green, Sur. 118. Sd. 2,722-28 ft.; comp.; 70 B.P.D. jtg.
Cox & Hamon No. 23 Green, Sur. 118. Drlg. 1,518 ft.
Cox & Hamon No. 9 Robles, Sur. 68. Sd. 2,680-83 ft.; completing.

Kohler—Duval County

Bunn Bros. & Coates No. 6-B Peters, Sur. 29. Sd. 1,835-47 ft.; set csg. 1,834 ft.; W.O.C.
Cox & Hamon No. 2 Gruy, Sur. 157. Sd 1,830-35 ft.; comp.; 81 B.P.D.
Cox & Hamon No. 3 Gruy, Sur. 157. Set csg. 1,845 ft.; W.O.C.

Labbe—Duval County

Humble O. & R. Co. No. 9 Roos, sec. 119. T.D. 2,809 ft.; comp.; 22 B.P.D.; perf. 2,805-07 ft.
Magnolia Pet. Co. No. 3 Labbe ranch, sec. 2. Set csg. 2,861 ft.; W.O.C.
Magnolia Pet. Co. No. 9 Labbe, Sur. 1. Sd. 2,867-70 ft.; set csg.; comp.; 75 B. P.D.; jetting on ½-in. ck.

Lundell—Duval County

Govt. Wells Oil Co. No. 7 Lundell, sec. 140 T.D. 1,537 ft.; drlg. plug.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 7 D.C.R.C., Sur. 203. Drlg. 317 ft.

Sarnosa—Duval County

Sarnosa Oil Corp. No. 18 Well, Sur. 130. Drlg. 1,316 ft.

Seven Sisters—Duval County

S. and D. Daube No. 36 Campos, Sur. 224. T.D. 2,734 ft.; W.O. pmp.
S. and D. Daube No. 39 Campos, Sur. 224. Set 7-in. csg. 2,669 ft.; T.D. 2,712 ft.; W.O.C.
S. & D. Daube No. 38 Campos, Sur. 224. Tstg.; T.D. 2,715 ft.; set 7-in. csg. 2,654 ft.
S. and D. Daube No. 40 Campos, Sur. 224. Sd. 2,693½-98½ ft.; set csg. 2,665 ft.; W.O.C.
Humble O. & R. Co. No. 23 Dowdy, Sur. 272. M.L. rig.
S. & D. Daube No. 37 Campos, Sur. 224. T.D. 2,730½ ft.; W.O. pmp.
Rudco O. & G. Co. No. 1 Ellis, 160-ac. tr., Sur. 308. M.L.M.
Sun Oil Co. No. 3 Rodriguez, Sur. 222. Swbg. 2,820 ft.
A. H. Tarver and Putnam Oil Co. No. 1 Ruiz, sec. 217. Drlg. 1,956 ft.

Sweden—Duval County

Hiawatha Oil Co. No. 1 Herberger, Sur 14, Ball Subd., Agua Poquita Gr. Tstg. sd. 5,849-60 ft.

Thomas-Lockhart—Duval County

Lockhart Bros. No. 3 Parr, Sur. 277. Cg. 3,956 ft.
Taylor Pet. Co. No. 1 Parr, 40-ac. tr., Sur. 279. Set csg. 279 ft.; W.O.C.

Pearsall—Frio County

Amerada Pet. Corp. No. 8 Halff & Oppenheimer, S. A. Ditch Sur. 1,104 (W.O.) Set 7-in. protective csg. 10,341 ft.; Drlg. 10,660 ft.
Amerada Pet. Corp. No. 4 Smith, Mason Sur. 322. T.D. 5,357 ft.; acdzd.; comp.; 470 B.P.D.

Darst Creek Extn.—Guadalupe County

Bayou River Oil Co. No. 1 State, J. K. Davis Sur. T.D. 2,390 ft.; R.U. pmp.
M. E. Brooks No. 1 Applin, Hodges Sur. D.&A. 2,608 ft.
Kenedy & Crowley No. 1 Anderson, J. R. Robinson Sur. S.D.; W.O. material 2,605 ft.
Riddle Oil Co. No. 2 Williams, DeWitt Sur. No. 13. S.D. 2,327 ft.
Texas Co. No. 8-A Knoblock, Joel Robinson Sur. Set csg. 2,500 ft.; W.O.C.

Luling—Guadalupe-Caldwell Counties

Bruce Albright No. 2 Cosey, J. Henry Sur. Drk.
Tom Graham No. 1 Pearnor, R. Hall Sur. T.D. 2,203 ft.; D.&A.
Magnolia Pet. Co. No. 16 Tiller, J. Henry Sur. Csg. set 2,095 ft.; comp.; 60 B.P.D. on pmp.; T.D. 2,099 ft.
Millican & Norman No. 1 Lampkin, J. Henry Sur. T.C. 1,714 ft.; T.D. 2,128 ft.; set csg. 2,127 ft.; comp.; 15 B.P.D.
Millican & Norman No. 2 Lampkin, J. Henry Sur. Set csg. 1,715 ft.; W.O.C.
Muckelroy & Schame No. 1 King, N. Reaville Sur. M.I.M.
Potter P. L. Co. No. 1 Cartwright, J. Henry Sur. T.D. 1,991 ft.; T.C. 1,781 ft.; 5½-in. csg. 1,770 ft.; swbd. S.G.
Spokane O. & G. Co. No. 1 Hibbits, J. Henry Sur. S.D. 410 ft.
Rio Bravo Oil Co. No. 17-L Merriweather. John Henry Sur. Spd.
Taylor Ref. Co. No. 1 Harris, Cottle Sur. T.D. Edw. 2,090 ft.; comp.; 128 B.P.D., 5% sulf. wtr.; on pmp.
Taylor Ref. Co. No. 2 Harris, H. Cottle Sur. R.U.

Staples—Guadalupe County

W. W. Lincoln No. 2 Gabriel, Geo. Allen Sur. Spd.
W. W. Lincoln No. 1 Sherrill, G. Allen Sur. D.&A. 1,066 ft.

Zoboroski—Guadalupe County

Felmont Corp. No. 4 Schueneman, G. DeWitt Sur. D.&A. 2,588 ft.
Forest Dev. Co. No. 2 Hoffman, G. DeWitt Sur. Set csg. 2,197 ft.; T.D. 2,214 ft.; stdg.
Forest Dev. Corp. No. 6 Hoffman, DeWitt Sur. Set csg. 2,284 ft.; T.D. 2,288 ft.; stdg.
Skivereen Oil Co. No. 1 State of Texas, Guad. River bed, 50 ft. S of No. 1. Tstg.; T.D. 2,240 ft.; pmpd. dry; S.D.

LaBlanca—Hidalgo County

Dee Davenport No. 1 Hidalgo Wtr. & Imp. Dist., Lot 16, Engleman Subd., Smith Sur. 262. Drlg. 4,912 ft.
Dee Davenport No. 2 Swallow, Clyde Fennis Ld. Co. Sur. Drlg. 6,407 ft.
Gulf States Oil Co. No. 2 Delta Orchards, Lot 3, Blk. 94, Engleman, Jr. Sur. Resubd. Drlg. sh. 2,520 ft.

Sandia—Jim Wells County

Smith & O'Bannon No. 1 Allen, Lot 1, Blk. "B," Bode Subd. Drlg. 4,117 ft.
Joe Walsh et al No. 2 Wade, Lot 2, Blk. "C," Bode Subd. Drlg. 323 ft.

North Pettus—Karnes County

Magnolia Pet. Co. No. 17 Porter, B.&B. Sur. 23. Comp.; 43 B.P.D. on pmp.
Magnolia Pet. Co. No. 18 Porter Sur. 23. Sd. 3,692-3,703 ft.; R.U. to pmp.

South Burnell—Karnes County

Dirks Bros. Co. No. 4 Ruhman, Johnson Sur. Sd. 3,595-3,615 ft.; comp.; 18 B.P.D. on ⅞-in. ck.; T.D. 3,624 ft.
Luling O. & G. Co. No. 4 Boyce, W. J. Porter Sur. Comp.; 370 B.P.D. on ¼-in. ck.; sd. 3,614½-20½ ft.; set 5⅞-in. csg. 3,612 ft.
Luling O. & G. Co. No. 5 Boyce, Samson Still Sur. No. 8. R.U.

Kingsville—Kleberg County

Harry Edwards No. 1 Noack, Lot 4, Blk. 50, Subd. of town of Uriah. T.D. 3,535 ft.; S.D.
Pettus Oil Ref. Co. No. 3 McKinney, Ballard Sur. Brkn. oil sd. 3,609-23 ft.; comp. 10 B.P.H. on ¼-in. ck.;; T.D. 3,630 ft.
Pettus Oil Ref. Co. No. 4-A McKinney, Ballard Sur. R.U.

Fort Merrill—Live Oak County

Mills Bennett Prod. Co. No. 2 Watson & Shipp, Pablo Salinas Sur. Drlg. 4,973 ft.

Calliham—McMullen County

J. V. Fleming No. 4 Lark, Scrugham Sur. Set 5½-in. csg. 1,041 ft.; W.O.C.
J. V. Fleming No. 5 Lark, Scrugham Sur. Drlg. 847 ft.

Ezzell—McMullen County

Edwin M. Jones No. 19 Ezzell, NE¼, NE¼, sec. 23. R.U.
Edwin M. Jones No. 4-B Ezzell, NE¼, SE¼, sec. 20. Spd.

Loma Alta—McMullen County

Humble O. & R. Co. No. 2 Atkinson, Deen Sur. 13. O.W.W.O.; D.&A. 2,217 ft.

South Calliham—McMullen County

Bill Howard No. 9 Claunch, Hely Sur. R.U.

Loma Alta—McMullen County

T. Lanier No. 1 Hagist, SE¼, N½, Sur. 481. S.D. 2,513 ft.

Agua Dulce—Nueces County

Heep Oil Corp. No. 1 Purl, 440-ac. tr., Subd. No. 2. Drlg. 2,797 ft.
Texon Drlg. Co. No. 2 Elliff, 3,054-ac. tr., Longorio Sur. Tstg. 6,600 ft.
United Prod. Co. No. 3-A Rivers, sec. 9 Peters Subd. Washing; T.D. 8,540 ft.; set csg. 5,729 ft.; rng. screen 5,702 ft.
United Prod. Co. No. 1 Schroeder, sec 87, Paul Subd., Driscoll ranch. Drlg. 7,254 ft.

Clara Driscoll—Nueces County

O. W. Killam No. 3 Ellick, 86-ac. tr., Sur 109. Set 7-in. csg. 3,934 ft.; perf. 3,905 10 ft.; recmtd. perf.; W.O.C.

S. Clara Driscoll—Nueces County

Sun Oil Co. No. 1 Flynn, sec. 110, Paul Subd., Driscoll ranch. Drlg. 1,563 ft.

Flour Bluff—Nueces County

Humble O. & R. Co. et al No. 1 Brett, Lot 1, Blk. 48. Set csg. 6,665 ft.; W.O.C.
Humble O. & R. Co. et al No. 4 Cordz, Blk. 45. Drlg. sh. 3,430 ft.
Humble O. & R. Co. et al No. 5 Cordz, Lot 16, Blk. 45. T.D. 6,663 ft.; comp.; no ga.
Humble O. & R. Co. et al No. 1 Downey. T.D. 6,661 ft.
Humble O. & R. Co. et al No. 4 Roberdeau, Lot 5, Blk. 49. T.D. 6,662 ft.; comp.; 121 B.P.D. on ⅛-in. ck.; sd. 6,620-62 ft.
Humble O. & R. Co. et al No. 5 Roberdeau, Lot 4, Blk. 49. Drlg. sh. 4,958 ft.
Humble O. & R. Co. et al No. 2 Swan, Lot 2, Blk. 54. Set csg. 6,672 ft.; W.O.C.
Humble O. & R. Co. et al No. 2-B Thompson, Lot 8, Blk. 55. Sd. 5½-in. csg. 6,662 ft.; flwg. in pits.

London—Nueces County

Wellington Oil Co. and Seaboard Oil Corp. No. 1-B Lehman, NW¼, SE¼, sec. 25. T.D. 5,000 ft.; S.D.; W.O.

Luby—Nueces County

Seaboard Oil Corp. No. 3 Luby, Blk. 3, Sh. 2. Drlg. 2,375 ft.
Seaboard Oil Corp. No. 1 Schaeffer, Blk. 3, Sh. 2, Luby Subd. Set csg. at T.D. 7,310 ft.; sd. 7,290-7,310 ft.; perf. 5,058-62 ft.; comp.; 486 B.P.D. on ¼-in. ck.
Stanolind O. & G. Co. No. 2 McCann, 565.3-ac. tr. D.S.T. 5,044-60½ ft.; 10 min. rec. 640 ft. oil, 50 ft. mud; W.P. 125 lbs.

Saxet Heights—Nueces County

Wm. Brady No. 2 Whalen, Villareal Sur. Drlg. 3,065 ft.
W. H. Harrison No. 3 McConnell, Blk. 5, Oak Park Addn. Set surf. csg. 307 ft.; stdg.
Phillips Pet. Co. No. 8 Corpus Christi Golf & Country Club, Villareal Sur. T.D. 2,078 ft.; perf. 4,051-56 ft.; recmtd.; W.O.C.

Saxet—Nueces County

Bryant & Howell No. 10 Frank, 40-ac. tr., Sur. 500. Set 5-in. csg. 6,988 ft.; perf. 6,730-40 ft.; comp.; 105 B.P.D. on ⅞-in. ck.; perf. 6,294-98 ft.
Bryant & Howell No. 4 Plachy, Sur. 25 Sd. 4,161-75 ft.; set 5½-in. csg. 4,250 ft.; W.O.C.
Donico Prod. Co. No. 8 Donigan, 80-ac. tr. sec. 7, Rge. 6. Sd. 4,800-70 ft.; completing.
J. E. Freeman No. 1 Scott, Sur. 500. Cg. 5,742 ft.
Greta Oil Corp. No. 2 Bliss, 25-ac. tr., Sur. 406. Fsg.; T.D. 6,900 ft.
Greta Oil Co. No. 5 Humphries, Stevens Sur. T.D. 6,790 ft.; set csg. 4,132 ft.; W.O.C.
Hiawatha Oil Co. No. 13 Hutchins-Stillwell, Blk. 30, Sheppard Farm Lots. Sd. 6,865-6,919 ft.; comp.; 178 B.P.D. on ⅛-in. ck.
Houston Oil Co. No. 5-A Harrell, Sheppard Farm Lots. T.D. 4,537 ft.; prep. D.S.T.
Houston Oil Co. No. 8-A Harrell, Lot 24, Sheppard Farm Lots. T.D. 4,539 ft.; set csg.; W.O.C.
Houston Oil Co. No. 4 Isensee, Lot 2, Sheppard Farm Lots. Set csg. 4,564 ft.; comp.; 169 B.P.D.; jetting.
Houston Oil Co. No. 4 Hunter, 75-ac. tr., sec. 8, Rge. 5. Drlg. 2,239 ft.
Houston Oil Co. No. 28 Morgan, 493.63-ac. tr., sec. 7, Rge. 6. R.U.
H. H. Howell No. 6 Hutchins, 80-ac. tr., Sur. 416. Set csg. 6,975 ft.; perf. 6,900-18 ft.; washing.
H. H. Howell No. 7 Hutchins, 80-ac. tr., Sur. 416. Drlg. 2,778 ft.
Kepley Prod. Co. No. 7 Donigan, 100-ac. tr., sec. 7, Rge. 5. Sd. 4,544-46 ft.; reworking.
Maryland Corp. and Renwar Oil Corp. No. 2 Stillwell-Sagarino, Sur. 500. Drlg. 5,623 ft.
Maryland Corp. and Renwar Oil Co. No. 2-B Morgan, Sur. 415. Drlg. 6,140 ft.
Morgan & Chapman Minerals Corp. No. 9 Morgan-Clark, NE¼, Sur. 405. T.D. 6,945 ft.; sdtrkd. 4,622 ft.; drlg. 6,821 ft.
Pan American Prod. Co. No. 5 Solar Sevier, Sur. 311. Drk.
Phillips Pet. Co. No. 7 Morgan, S½, sec. 405. Drlg. 5,750 ft.
Republic Nat. Gas Co. No. 21 Dunn, Blk. 37, Sheppard Farm Lots. S.D. 6,516 ft.
Richardson Pet. Co. No. 3 Harrell, Blk. 33, Sheppard Farm Lots. Drlg. 5,092 ft.
Richardson Pet. Co. No. 6 Hoelscher, Blk. 22, Russell Farm Lots. Set csg. 4,425 ft.; sd. 4,421-25 ft.; comp.; 230 B.P.D.; ⅞-in. ck.
Richardson Pet. Co. No. 7 Hoelscher, Blk. 22, Russell Farm Lots. Drlg. 1,517 ft.
Richardson Pet. Co. No. 7 Perkins-Lagasse, Blk. 25, Sheppard Farm Lots. Set surf. csg. 200 ft.; W.O.C.
Richardson Pet. Co. No. 13 Quiros, Sur. 311. Drlg. 4,952 ft.
Richardson Pet. Co. No. 11 Sedwick, 184-ac. tr., Dunn Sur. 312. Cg. 5,966 ft.
Southern Minerals Corp. No. 21 Bliss, Sur. 404. Blew out while attempting to set 1,114 ft.; surf. csg.; abd.
Southern Minerals Corp. No. 9 Ocker, 205-ac. tr. Set 7-in. csg. 4,863 ft.; sd. 4,862-71 ft.; jetting in pits.
Texon Drlg. Co. No. 1 Janosek, 32.74-ac. tr., Sur. 25. Set 7-in. csg. 3,871 ft.; T.D. 4,227 ft.
Warner Quinlan Co. of Tex. No. 5 Isensee, Blk. 1, Sheppard Farm Lots. Set

csg. 4,894 ft.; T.D. 4,904 ft.; perf. 4,-539½-43½ ft.; comp.; est. 65 B.P.D.

Sullivan—Nueces County

Lockhart et al No. 1 O. Purl, Lot 2, sec. 7, Ross Peters Subd. No. 2. Sd. 7,032-52 ft.; P.B. and sdtrkd.; set 7-in. csg. at T.D. 7,085 ft.; W.O.C.

Midway—San Patricio County

Phillips Pet. Co. No. 3 Ivey, sec. "K," Pauls Subd. Set csg. 5,360 ft.; comp.; 169 B.P.D.; 5/32-in. ck.

Phillips Pet. Co. No. 3 Schmidt, sec. 81. Set csg. 5,360 ft.; perf. 5,342-45 ft.; comp.; 155 B.P.D.; ⅛-in. ck.

Sun Oil Co. No. 2 Coggin, sec. 82. R.U.

Plymouth—San Patricio County

Heep Oil Corp. No. 8-F Welder, sec. 46. Drlg. sdy. sh. 5,216 ft.

Plymouth Oil Co. No. 82-C Welder, sec. 70. Sd. 5,628-39 ft.; tstg.

Plymouth Oil Co. No. 83-C Welder, sec. 70. Drlg. sh. 1,730 ft.

Sun Oil Co. No. 3 Roundtree, sec. 34, Lot 4. Perf. 5,636-37 ft.; pmpd. 30 bbls. oil, 50 bbls. S.W.; sanded up; reworking.

Taft Field—San Patricio County

Greta Oil Corp. No. 1 Pullin, Blk. 1, Lot 4. Drlg. sh. 2,625 ft.

Humble O. & R. Co. No. 28 Mayo, 32-ac. tr., Ottman Sur. Set csg. 3,980 ft.; W. O.C.

Barbacoas—Starr County

K. E. Merren No. 1-A S.C.C.C., Blk. 84, Lambeth Subd., Porc. 89. Set csg. at T.D. 5,640 ft.; sd. 5,470-91 ft.; C.O.

Ricaby—Starr County

Dean Bros. No. 1 Valadez, Porc. 84. Sd. 1,863-72 ft.; set 5½-in. csg. 1,872 ft.; T.D. 1,873 ft.; S.D.

Dodd, Tr., No. 5 Wood Est., Porc. 84. Set csg. 1,772 ft.; W.O.C.

J. W. Edwards No. 1 Vela, Porc. 84. Cg. 1,916 ft.

Sun Oil Co. No. 5 Wardner, Vela Sur., Porc. 84. Set surf. csg.; W.O.C.

Manda—Travis County

J. H. Robertson No. 4 Christian, J. P. Kemp Sur. No. 27. Serp. 643-730 ft.; 7-in. csg. at 636 ft.; R.U. to pmp.

Carolina-Texas—Webb County

E. J. Purl et al No. 2 Garza, Sur. 48. Drlg. 716 ft.

Cole—Webb County

O. W. Killam No. 56 Benavides, Blk. 17, sec. 8. Drlg. plugs 3,405 ft.

Magnolia Pet. Co. No. 3 Valdez, Valdez Sur., Blk. 8. Drlg. 3,676 ft.

Killam—Webb County

French Oil Co. No. 1 Perez, Blk. 3, Sur. 1007. Oil sd. 1,981-82½ ft.; tstg.

Hamill & Smith No. 2 Garcia, 80-ac. tr., Sur. 337. Set csg. on sd. 1,900 ft.; comp.; no gauge.

O. W. Killam No. 1 Garcia-Villareal, E½, SE¼, Sur. 337. Cg. 1,979 ft.

O. W. Killam No. 12 Garcia, Sur. 786. Oil sd. 2,002-10½ ft.; comp.; 35 B.P.D. on pmp.

Mills Bennett Prod. Co. No. 4 Garcia, 80-ac. tr., Sur. 786. T.D. 2,000 ft.; comp.; 40 B.P.D.

Rowan & Hope No. 3 Laurel Bros., Sur. 1006. Drlg. 67 ft.

Lopez—Webb-Duval Counties

C. H. Andrus No. 1 Billings, Sur. 10. R.U.

O'Hern—Webb County

Sun Oil Co. No. 12 Benavides, Blk. 509. Drlg. 2,607 ft.

Olton—Webb County

Gypsy Oil Co. No. 10 Martin, Sur. 458. Sd. 1,854-61 ft.; comp.; 5,000,000 ft. gas; T.D. 1,893 ft.; R.P. 560 lbs.

Gypsy Oil Co. No. 11 Martin, Laurel Sur. 458. Cg. 1,873 ft.

Hamil & Smith No. 3 Martin, sec. 337. Sd. 1,895-1,910 ft.; comp.; 250 B.P.D.

Hamil & Smith No. 4 Martin, sec. 2167. Sd. 1,895-1,910 ft.; comp.; 250 B.P.D.

Hamil & Smith No. 5 Martin, sec. 2167. Drlg. 1,255 ft.

Mills Bennett Prod. Co. No. 1 Martin, sec. 458. Set csg. 1,913 ft.; W.O.C.

Morgan & Kirkwood No. 1 Juarez, Blk. 23, Sur. 1005. R.U.

Porter & Blanchard No. 1 Laurel, Sur. 1006. Set csg. 1,930 ft.; sd. 1,929-30 ft.

LaSal Viejo—Willacy County

Shell Pet. Corp. No. 2 Yturria, Sh. 64, Carricitos Gr. Drlg. 5,927 ft.

Escobas—Zapata County

Duhep Oil Co. No. 28 Trevino, 326-ac. tr., Sh. 25. Drlg. 721 ft.

Russell Leasing Co. No. 4 Bustimante, Blk. 13, Sh. 10. Sd. 1,131-41 ft.; swbg.; T.D. 1,201 ft.

B. W. Roscoe No. 28 Bustimante, Sh. 33, Fansler Part. Sd. 1,280-91 ft.; comp.; 20 B.P.D.

Texas Co. No. 107 Jennings, Cerrito Blanco Gr. Drlg. 1,257 ft.

NORTH TEXAS WILDCATS

Archer County

Burk Roy. Co. No. 1 J. B. Miller, sec. 20, A.T.N.C.L. Sur. Drlg. 2,330 ft.

Hamon, Hanlon-Buchanan, Inc., et al No. 1 W. P. Ferguson, sec. 2, H.&G.N. Sur. Cg. L. 3,950 ft.

Baylor County

Golding & Cochran No. 1 Louis Hencirik, sec. 5, B.B.B.&C. Sur. Drlg. 1,420 ft.

Hampton et al No. 1 A. G. Cochrell, sec. 2,404, T.E.&L. Sur. Drlg. 1,230 ft.

Clay County

W. Gant No. 5 C. M. Worsham, D.L.&C.A. Sur. 1073. Drlg. 3,401 ft.

Healdton O. & G. Co. No. 1 Wallace, Belcher Subd. Spd.

Cooke County

Benton & Holmes No. 1 Gibson, J. English Sur. A-345. T.D. 3,830 ft.; P.B. to 3,470 ft.

Seitz, Comegy & Seitz No. 1 W. A. Erwin, B.B.B.&C. Sur. A-162. Drlg. 1,210 ft.

Denton County

W. C. Curry et al No. 1 G. F. Owens, N. Rudder Sur. A-1060. Drlg. 600 ft.

Bruce Lee No. 1 Boyles, S. Ross Sur. A-112. Drlg. 1,500 ft.

Miller Bros. No. 1 D. H. Luster, F. Trevino Sur. A-121. Drlg. 2,505 ft.

Scroggins et al No. 1 S. M. Freeman, Bradshaw Sur. A-104. S.D.O. 1,900 ft.

Foard County

O. P. Burnham No. 1 Ward, sec. 21, H.& T.C. Sur., Blk. 8. Drlg. 2,275 ft.

Grayson County

Denver P. & R. No. 1 Cannon, A. Berry Sur. A-130. Drlg. 3,455 ft.

Montague County

J. W. Sorrell et al No. 1 J. E. Walthall, S. H. Smith Sur. A-662. S.D. 2,000 ft.

Ventex Investments, Ltd., No. 1 S. E. Bell, sec. 11, M.E.P.&P. Sur. Drlg. 3,530 ft.

Wichita County

W. B. Hamilton No. 1 Mrs. M. Parker, M. Ramsey Sur. A-471. Drlg. 825 ft.

Hammon Hanlon Buchanan, Inc., No. 1 A. F. Fassett, sec. 1, E.T.R.R.. C.O. 1,-505 ft.

LeBus No. 1 J. F. Miller, W. R. Eaves Sur. A-447. Drlg. 3,610 ft.

W. B. Omohundro No. 1 First Natl. Co., sec. 28, W.V.F.L. Sur. Drlg. 3,040 ft.

Patterson et al No. 1 B. C. Ellis, J. Waldschmidt Sur. A-792. S.D.O. 930 ft.

Felix Payne No. 1 P. R. Pace, R. J. Scott Sur. A-253. Loc.

E. J. Stump No. 1 M. P. Bishop, L. Netheriey Sur. A-240. Set surface pipe; S.D.O.

E. J. Stump et al No. 1 J. and J. Waggoner, W. R. Eaves Sur. A-753. 7-in. cmtd. 3,806 ft.; W.O.C.

Clyde Texan Oil Fields Co. No. 1 A. W. Burnside, John M. Sharp Sur. A-262. Drlg. 2,650 ft.

Wilbarger County

Barry & Hayes No. 1 McGill, sec. 3, Blk. 9, H.&T.C. Sur. Drlg. 2,850 ft.

King Oil Co. No. 1 R. L. Castleberry, sec. 68, H.&T.C. Sur., Blk. 14. Drlg. 1,625 ft.

W. Little No. 1 A. P. Morris, sec. 3, H.T. &C. Sur., Blk. 14. Spd.

W. W. McDonald No. 3 Waggoner A, sec. 26, H.&T.C. Sur. Testing lime 3,638-54 ft. with acid; P.B. and tstg. S.S.O. 3,-117-25 ft.

Wise County

W. D. Dilbeck No. 1 J. I. Wilkins, E. Stephens Sur. S.D. 600 ft.

Latex Oil Co. No. 1 C. R. Smith, J. Couch Sur. A-104. Showing gas 3,843-45 ft.; 6⅝-in. 3,943 ft.; S.S.O.&G. 3,952-95 ft.; bailing O.&S.W.

Young County

F. W. Bennett No. 2 R. V. Tidwell, J. L. Blackwood Sur. A-1378. Drlg. 3,590 ft.

T. D. Humphrey No. 1 S. R. Ragland T.D. Kuykendall Sur. Sd.&L. 3,773-97 ft.; C.O. after shot.

L. A. Long No. 1 F. A. Burnett, E.G. Rector Sur. No. A-239. 3,700 ft.; S.D.

Lupton & Long No. 1 W. I. Gilmore, J. Gilmore Sur. A-2135. Drlg. 3,500 ft.

W-K Royalty Co. No. 1 J. A. Wright, J. N. Taylor Sur. A-1243. S.D.O. 2,500 ft.

E. C. TEXAS WILDCATS

Angelina County

John Coates No. 1 J. L. Russell, Jose Morino Sur., E of Diboll. Drk.

Cherokee County

Merica Oil Co. No. 1 Cherokee Dev. Co., A. J. Acker Sur., 2 mi. E of Maydelle. M.I.M.

E. H. Moore, Inc., No. 1 Chronister Lbr. Co., 3 miles NE of wells. Tr. 71, Blk. 33, John Durst Gr. Loc.

Falls County

McCleod et al No. 1 F. Bolton, 450 ft. from N and W of 100-a. tr., J. R. Cockrill Sur., 4 mi. NW Rosebud. R.U.

Fannin County

Stewart Drlg. Co. No. 1 N. Young, S. H. Hitchcock Sur., 1 mi. W of Randolph, W. of Glazier & Trippe No. 1 Young dry hole; coring 3,300 ft.

Freestone County

Holt et al No. 1 W. H. Chambers, W. D. Allison Sur., 2¾ mi. N of Keechi 5,200-ft. test. El. 426 ft.; drlg. 6,100 ft.

J. K. Hughes No. 1 Foster C. E. Gray Sur., 5 mi. SE of Kirvin. R.U.

C. E. Rossiter No. 1 J. P. Fulton in J. P. Fulton Sur., 2½ mi. E of Donie. S.D. 956 ft.

Gregg County

Humble O. & R. Co. & Gulf O. Corp. No. 1 E. Robertson, M. Mann Sur., 2½ mi. SW of Longview Trinity test. El. 272 ft. Dlg. 4,464 ft.

Henderson County

American Liberty Oil Co. et al No. 1 LaRue & Johnson, Blk. 11, P. Jackson Sur., 2 mi. W of LaRue. El. 464 ft.; drlg. 6,266 ft.

S. Hunt et al No. 1 Dillard, H. Jeffries Sur., 16 mi. N of Trinidad. El. 361 ft.; drlg. 3,100 ft.

Wm. McDougall No. 1 Trinity, F. & S. Land Co., Blk. 1, H.&T.C. Sur. Drk.

Tide Water Assoc. et al No. 2-C McElreath & Suggett. W. P. Wyche Sur. Top Glen Rose 6,282 ft.; drlg. 9,095 ft.

Hopkins County

V. A. Hughes No. 1 B. and T. Hardaway, Wm. A. Irwin Sur., 3 mi. E of Ridgeway. R.U.

Houston County

American Liberty No. 2 J. A. Bean, W. Burke Sur., 1 mi. N of Grapeland. approx. 2,200 ft. E of No. 1. Drlg. 5,977 ft.

Ridgeway-Jackson No. 2 H. F. Moore, H. Master Sur., 2 mi. SE of Crockett. Crg. 1,334 ft.

Leon County

Kelly & Fox No. 1 Bryant, A. M. Coultern Sur., 1 mi. E of Marquez. S.D.

Limestone County

Pure Oil Co. No. 16-T Kendrick, P. Varella Sur., Mexia field. Drlg. 7,530 ft.

Stanolind O. & G. Co. No. 1 T. Norris, in Thresher Sur., 5 mi. N of Kosse; 6,500-ft. test. El. 528 ft.; drlg. 2,945 ft.

Nacogdoches County

G. C. Collier and Corley No. 1-A A. T. Mast, 14 mi. SW of Nacogdoches, T. S. Lambert Sur., 750 ft. N of No. 1. R.U.

Navarro County

Mrs. Jane Robinson No. 1 Fortson Bros., Eli Smith Sur., 5 mi. NE Corsicana. S.D. 10 ft.

T. Sharpe et al No. 1 E. B. McDowell, T. Jordan Sur., ½ mi. S of Bassets. Drlg. 2,750 ft.

Red River County

Cosby, Inc., No. 1 Hocker & Hughes, southern part of county. Top Woodbine 2,853 ft.; drlg. 3,277 ft.

Rusk County

J. W. Shipman et al No. 1 Citizens Bank, J. J. Y'Barbo Sur., 4 mi. NE of Henderson. S.D. 4,500 ft.

Van Zandt County

P. E. Hill No. 1 J. L. Chitty, M. Neal Sur., 12 mi. S of Canton. Drlg. 2,169 ft.

EAST TEXAS

(Border Counties)

Cass County

American Liberty Oil Co. No. 5 Maxie, John Collom Sur. 10¾-in. 2,000 ft.; drlg. 2,300 ft.

Bay Oil Corp. No. 3 Cobb, G. Crowder Sur. 13⅜-in. 250 ft.

R. W. Norton No. 2 Hussey, P. Evans Sur. Comp.; flw. 87 B.P.D.; T.D. 6,-118 ft.

R. W. Norton No. 3 W. E. Starke, 13⅜-in. 250 ft. Drlg. 3,565 ft.

United Prod. Co. No. 4 Allday, P. Evans Sur. T.D. 6,016 ft.; tstg.

United Prod. Co. No. 4 Belote, H. Holbert Sur. 9⅝-in. 2,287 ft.; drlg. 3,560 ft.

United Prod. Co. No. 7 Bewley, H. Holbert Sur. Drlg. 5,660 ft.

United Prod. Co. No. 1 fee, H. Holbert Sur. T.D. 6,070 ft.; tstg.

United Prod. Co. No. 2 fee 575, B. Holms Sur. 7-in. 2,988 ft.; T.D. 6,024 ft.

United Prod. Co. No. 1-A Starke, D. Gilliam Sur. Tstg. dry; S.D.; W.O.; T.D. 6,050 ft.

Harrison County

J. B. Bond et al No. 1 Bailey & Martin, Geo. Martin Sur. Drlg. 6,125 ft.

Marion County—Rodessa

Arkansas-Louisiana Gas Co. No. 2 Emma Ford, A. D. S. Coy Sur. Drlg. 3,760 ft.

Arkansas-La. Gas Co. No. 1 J. P. Fant, L. P. Cadenhead Sur. Acidized; T.D. 6,-150 ft.; swbd. dry; will shoot.

Ark.-La. Gas Co. No. 1 Wade Houston, A. D. S. Coy Sur. 10¾-in. 2,025 ft.; drlg. 3,590 ft.

Fohs Oil Co. No. 1 W. T. Nellon, R. Bennington Sur. R.U.

Fohs Oil Co. No. 2 M. Reynolds, A. D. S. Coy Sur. Cutting stuck D.S.; T.D. 5,-783 ft.

Holcomb & Thomasson No. 1 Gray-Taylor, A.D.S. Coy Sur. Drlg. 3,540 ft.

Mid-Continent Pet. Corp. No. 3 Sory, A. D. S. Coy Sur. Comp.; flw. 315 B.P.D.; T.D. 6,057 ft.

Mid-Continent Pet. Corp. No. 4 Sory, A. D. S. Coy Sur. Drlg. 1,650 ft.

Hunter Co. No. 3 Fonda, A. D. S. Coy Sur. P.B. and W.O.C.S.; swbg.; T.D. 6,143 ft.

Shell Pet. Corp. No. 1 L. Henderson, R. Bennington Sur., Lot 8. Drlg. 5,720 ft.

United Prod. Co. No. 2 Hutchinson, A. D. S. Coy Sur. Rng. csg.: T.D. 6,116 ft.

United Prod. Co. No. 3 Hutchinson, A. D. S. Coy Sur. 9⅝-in. 2,160 ft.; cg. 3,075 ft.

United Prod. Co. No. 4 Hutchinson, A. D. S. Coy Sur. 9⅝-in. csg. 2,128 ft.; drlg. 2,785 ft.

Panola County

Danciger O. & G. Co. No. 1 Tatum, A. Bissell Sur. Drlg. 6,075 ft.

Magnolia Pet. Co. No. 2 E. A. Hull, Thos Applewhite Sur. Cg. 8,460 ft.

WEST TEXAS WILDCATS

Andrews County

American Liberty O. Co. No. 1 E. Cowden sec. 14, Blk. A-55, P.S.L. Sur. S.D. 5,002 ft.

M. J. Delaney No. 1 E. P. Moore, sec. 12, Blk. A-20, P.S.L. Sur. T.D. 4,579 ft.; M. S. Forgeron et al No. 1 Lockhart & Brown, C NE¼ sec. 20, Blk. A-41, P.S.L. Sur. S.D. 179 ft.

Gulf Oil Corp. No. 1 State, sec. 8, Blk. 14. Drlg. 2,300 ft.

Bailey County

Etz & Robinson No. 1 Enochs, Tract 66, League 182, Floyd Co. School Lands Sur. S.D. 1,970 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd., sec. 66, Blk. 10, G.H.&S.A. Sur. S.D. 6,001 ft.; straight reaming.

Storey No. 1 Wilson, sec. 3, Blk. 212, T.& St.L. Sur. S.D. 2,545 ft.

Cochran County

Texas Co. No. 1 Slaughter. Drlg. 4,930 ft.

P. N. Wiggins et al No. 1 Dean, NE cor. League 58, Martin Co. School Lands. Drlg. 4,384 ft.

Pete Wiggins et al No. 1 C. Slaughter Dean, C Lab. 26, League 92, Lipscomb Co. Sch. Ld. T.D. 5,020 ft.; acidized; swbg.

Concho County

Sam Murray No. 1 R. G. Armor, sec. 105, T.&N.O. Sur. Spudded.

Coke County

Barnett Pet. Co. No. 1 J. R. Mims, sec. 39, Blk. W, T.&P. Sur. Loc.

H. E. Ogden et al No. 1 Rawlins, sec. 390, Blk. B-21. S.D. 515 ft.

Crane County

Gulf Oil Corp. No. 2 McKnight, sec. 8 Blk. B-21. T.D. 5,404 ft.; P.B. to 3,210 ft.; S.D.

Wilcox O. & G. Co. No. 1 McKnight, sec. 9, Blk. 46, Twp. 3s, G.M.M.B.&A. Sur. Drlg. 4,674 ft.

Crockett County

Moore Bros. No. 1 P. Perner, sec. 37, Blk. 2, I.&G.N. Sur. Drlg. 2,308 ft.

J. N. Simpson No. 1 Hoover, sec. 2, Blk. FF, G.C.&S.F. Sur. R.U.S.T.

Stewart & Cormas No. 1 Hoover, 330 ft. S and 2,310 ft. W, sec. 1, Blk. FF, B.B Sur. Drlg. 125 ft.

Dawson County

R. Albaugh No. 1 D. Hogg, SE of SE sec. 17, Blk. 34, Twp. 4n, T.&P. Sur. W.O.C. 3,560 ft.

E. L. Wilson No. 1 Scanlon, Sec. 83, Blk M, E.L.R.R. Sur. S.D. 4,965 ft.; P.B. to 4,933 ft.; pumping 40 bbls. oil and 8 bbls. wtr. per day.

Dickens County

C. E. Litchfield No. 1 Harris, sec. 354, Blk. 1, H.&G.N. Sur. S.D. 1,600 ft.

J. F. Morrisey et al No. 1 C. L. Bird, 550 ft. S and 800 ft. W, sec. 290, Blk. 1, H.&G.N. Sur. S.D. 500 ft.

Edwards County

A. P. Carter No. 1 F. D. Sweeten, S&E sec. 48, Blk. 2, B&B Sur., 1½ mi. E of Rock Springs. Fsg. 5,096 ft.

Ector County

Fuhrman Pet. Corp. No. 1 E. Cowden, sec. 41, Blk. 43, Twp. 2s, T.&P. Sur. Drlg. 4,312 ft.

Shasta Oil Co. No. 1 K. Sands, sec. 32, Blk. 44, T.&P. Sur. T.D. 4,324 ft.; R.U. S.T.

El Paso County

Tri-State Oil Co. No. 1 Kinkle. Drlg. 3,-061 ft. No report.

Fisher County

I. J. Allen No. 1 H. S. Newman, 330 ft. S of SW cor. of Lot 48 and 1,650 ft. from Lot 49, Bastrop Co. Sch. Lds. M.I.M.

Bond Oil Corp. No. 1 N. Bertram, 1 mi. S of Sylvester. Drlg. 948 ft.

Consolidated Oil Co. et al No. 1 Florida. Drlg. 2,380 ft.

Gaines County

Amerada Pet. Corp. No. 1 Matthews, sec. 417, Blk. G, C.C.S.D.&R.G.N.G. Sur. T.D. 5,018 ft.; P.B. to 5,008 ft.; 110 bbls. fluid in 6 hrs., 41% water and B.S.

Continental Oil Co. No. 2 Jones, sec. 1, Blk. A-8, P.S.L. Sur. R.U.R.

R. H. Gill No. 1 S. R. Simpson, sec. 8, Blk. C-44, P.S.L. Sur. S.D. 4,800 ft.

Hockley County

Frank A. Bates No. 1 Lockett, C of NE of S sec. 5, Blk. 1, P.S.L. Sur. Drlg. 4,966 ft.

Stanolind O. & G. Co. No. 1 A. A. Slaughter, C SW¼ Labour 76, League 37 Zavalla Co. Sch. Lds. Sur. T.D. 4,975 ft.; shot with 180 qts. 4,935-72 ft.; tstg.

The Texas Co. No. 2 Slaughter, 725 ft. N and 665 ft. W, Labour 77, League 38, Zavalla Co. Sch. Lds. Loc.

Howard County

W. F. McDermott et al No. 1 Lucas, sec. 18, Blk. 29, Twp. 1n, T.&P. Sur., 5 mi. N of Dodge pool. S.D. 391 ft.

Hudspeth County

Haymon Krupp Oil & Ld. Co No. 1 Thurston, SE¼ sec. 34, Blk. 74, Twp. 6.; drlg. 3,062 ft.

Haymon Krupp No. 1 Briggs, sec. 24, Blk. 73, Twp. 7, T.&P. Sur. Drlg. 468 ft.

Jeff Davis County

H. D. Wilcox et al No. 1 Jones-Coffield. S.D. 3,315 ft.

Loving County

Barnett Pet. Co. No. 1-A Johnson, sec. 2, Blk. 57, Twp. 1, T.&P. Sur. S.D. 1,875 ft.

Barnett Pet. Corp. No. 1-B W. D. Johnson, sec. 12, Blk. 56, Twp. 1, T.&P. Sur. Drlg. 2,000 ft.

Continental Oil Co. No. 1 E. C. Marrs, sec 20, Blk. 54, Twp. 2, T.&P. Sur. Drlg. 2,487 ft.

Martin County

J. L. Green et al No. 1 O. B. Holt, C of Labour 20, Lge. 319, Garza Co. Sch. Lds. T.D. 855 ft.. U.R. csg.

Mitchell County

Mitchell O. & G. Co. No. 1 Z. Morrison, sec. 36. Blk. 29, Twp. 1n, T.&P. Sur. S.D. 3,157 ft.

Nolan County

M. S. Ingleright & L. E. Hults No. 1 Blank, Blk. 1-A, H.&T.C. Sur., near Decker, Drlg 2,225 ft.

Pecos County

K. Kimberlin No. 1 Humble-Young, sec. 49, Blk. 10, H.&G.N. Sur. Drlg. 1,817 ft.

S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. Sur. Dlrg. by drill stem.

Trans-Pecos Oil Co. No. 1 Popham. T.D. 535 ft.; lost hole; skd. 25 ft. south; drlg. 875 ft.

W. K. Tuller No. 2 Perry. T.D. 1,920 ft. Drlg. 1,000 ft. C.O.

Wilcox O. & G. Co. No. 1 Serf, 2,310 ft. from S and 950 ft. from W, sec. 27, Blk. 130, T.&St.L. Sur. Loc.

Presidio County

L. C. Brite No. 4 fee, C NW¼ sec. 113, Blk 12, G.H.&S.A. Sur. S.D. 4,375 ft.

Sadler Bros. et al No. 1 Bagley. S.D. 3,315 ft.

Reagan County

K. E. Sherman No. 1 W. E. Friend, SW cor. sec. 3, Wm. Allen Sur. W.O.C. 2,-300 ft.

Moore Bros. No. 1 University, sec. 8, Blk. 7. Fsg. 2,860 ft.

Reeves County

Barnett Pet. Corp. No. 1 Ely, sec. 38, Blk. 71, P.S.L. Sur., 12 mi. NW of Toyah. Fsg. 1,400 ft.

Runnels County

Price & Koener No. 1 Beddo, sec. 51, Thompson Casey Sur. Drlg.

K Z Oil Co. No. 1 B. Fletcher, E. C. Good Sur. S.D. 3,306 ft.

Stevens & Glover No. 1 Fowler, sec. 150, E.T.R.R Sur., 2 mi. NE of Ballinger T.D. 1,095 ft.; S.D.

Schleicher County

J. M. Cooper No. 2 B. Page, sec. 40, Blk. L G.H.&S.A. Sur. S.D. 4,550 ft.; ran 7-in. csg.

Tex.Tor Oil Corp. No. 1 Judkins & Spencer, C of SW¼ sec. 33, Blk. A, A.&B. Sur. T.D. 3,133 ft.; U.R. csg.

Scurry County

Robinson Drlg. Co. No. 1 Martin, sec. 147, H.&T.C. Sur. Drlg. 1,321 ft.

T. G. Shaw Oil Co. No. 1 First Natl. Bank, Drlg. 1,357 ft.

Sterling County

Wilcox O. & G. Co. No. 1 Kinnebrew Est., sec. 101, Blk. 2, H.&.T.C. Sur. Drlg. 1,-500 ft.

Snowden & McSweeney No. 1 Harris, sec. 110, Blk. 6, H.&T.C. Sur., 20 mi. SE of Sterling City. M.I.M.

Sutton County

Ordovician Oil Co. No. 1 Evans, sec. 1, L. Stubblefield Sur., 32 mi. SE of Sonora. Drlg. 2,879 ft.

Terry County

Anthony & Rice No. 1 Brownfield, C NW¼ sec. 28, Blk. A-1, E.L.R.R. Sur. S.D. 5,340 ft.

Tom Green County

Humble O. & R. Co. No. 1 Lewis & Wardlaw, 2,080 ft. S & 660 ft. E. sec. 5, Blk. 17, H.&T.C. Sur. M.I.R.

Ward County

L. F. White et al No. 1 Rector-Monroe F cor. sec. 3, Blk. 1, W.&N.W. Sur. Top Del. L. 4,635 ft.; top Del. sd. 4,670 ft., T.D. 4,710 ft.

Yoakum County

American Liberty Oil Co. No. 1 Claywater. T.D. 250 ft.; rmg.

American Liberty Oil Co. No. 1 Sawyer, SE¼, sec. 702, Blk. D. Loc.

Denver Prod. & Ref. Co. No. 1-A Whittenburg, 660 ft. from N and W, sec. 830, Blk. D. Loc.

J. L. Green No. 1 Bartlett, NE¼ sec. 359, Blk. D, 12 mi. W of Plains. Loc.

J. L. Greene et al No. 1 Nevels, sec. 709, Blk. D. Loc.

Moore Bros. No. 1 Cleveland, sec. 706, Blk. D, J. H. Gibson Sur. T.D. 5,506 ft.; P.B. to 5,328 ft.

Skelly and Sun Oil Co. No. 1 Kiser, sec. 640, Blk. D. Loc.

Standard of Texas No. 1 M. B. Sawyer, sec. 576, Blk. D, J. H. Gibson Sur. S.D. 4,846 ft.

L. Stogner et al No. 1 J. A. Blade., sec. 103, Blk. D. Loc.

Texas Co. No. 1 Walker, sec. 794, Blk. D El. 3,656 ft.; T.D. 5,180 ft.; P.B. to 5,-162 ft.; shot; C.O.

P. N. Wiggins et al No. 1 Bartlett, sec. 359, Blk. D. S.D. 150 ft.

RANGER (CENTRAL TEXAS) DISTRICT

Brown County

C. R. Cox, Tr., No. 1 Jan Lee, sec. 11, B.B.B.&C. Sur., NE cor. county. S.D. 240 ft.

R. A. J. Cox et al No. 1 H. A. Nichols, 10 mi. SE of Cross Cut, F. Wardsziski Sur., sec. 477. Drlg. 1,150 ft.

Callahan County

Hal Hughes No. 1 Poindexter, sec. 350, Geo. Hancock Sur., 2 mi. NE of Oplin. Drlg. 800 ft.

J. C. Jackson et al No. 1 Thompson, 2 mi. S Eula, sec. 30, B.B.B.&C. Sur. U.R. 6⅝-in. 1,350 ft.

Phillips Pet. Co. No. 1 Cozart, 1 mi. NW Scranton, M. Cherry Sur. Spud. and S.D.

Coleman County

J. F. Brock No. 1 J. H. Livingston, SE cor. SW¼ county, J. D. Waters Sur. No. 208. Spud and S.D.

Dixie O.&G. Co. No. 1 Reaves, 6 mi. NW Bangs, J. M. Rhine Sur. No. 629. S.D. 805 reprs.

Comanche County

N. D. Gallagher et al No. 1 Mrs. B. I. Terry, Desdemona pool, N. H. Kuykendall Sur. Drlg. 4,203 ft.

Dobbs Oil Co. No. 1 Hodges, sec. 11, Blk. 2, H.&T.C. Sur. S.D. 220 ft.

Eastland County

G. D. Chastain et al No. 1 Weddington, 4 mi. N Cisco, sec. 496, S.P.R.R. Sur. Drlg. 1,725 ft.

Hickok Prod. & Dev. Co. No. 1 Van Parmer, NW cor. county, sec. 477, S.P.R.R. Sur. Drlg. 1,350 ft.

J. D. Kittrell No. 1 Reynolds, 5 mi. E of Carbon, sec. 23, H.&T.C. Sur., Blk. 1. T. D. 600 ft.; underreaming 8¼-in.

Monark O. & G. Co. No. 1 Bowman, sec. 14 H.&T.C. Sur. Blk. 4, 3 mi. N Eastland. S.D. 2,140 ft.

Erath County

Arnold Oil Co. No. 1 McMillan, 2 mi. SE of Desdemona, T. H. Dixon Sur., Abst. 1103. S.D. 160 ft.

Hoffman & Page No. 1 Clayton, 415 ft. from S and 1,117 ft. from W line of D. J. O. Millard Sur., 2 mi. SE Desdemona. M.I.M.

Haskell County

E. W. Marland & H. B. Drake No. 1 Corothers. 6 mi. S Haskell, sec. 67. D. E Zaaz Sur. Underreaming 6-in. csg. 2,-720 ft.

Jack County

Bennett Pet. Corp. No. 1 J. S. Rhodes, 2½ mi. NE Bryson, W. Higgins Sur., Abst. 2,199. Loc.

J. P. Burrus No. 1 W. J. Eatherly, J. Helmstutler Sur. T.D. 1,200 ft.; S.D.

Hanlon-Buchanan, Inc., No. 1 Rankin, 2 mi. NE Rhodes pool, J. W. Matlock Sur., Abst. 1479. Drlg. 2,750 ft.

Hanlon-Buchanan, Inc., No. 1 Worthings, E edge Avis, S.A.&M.G. Sur., Abst. 589. Drlg. 2,235 ft.

H. B. Madden No. 1 J. L. Mask, sec. 2708, T.E.&L. Sur. S.D. 3,000 ft.

Nelson Oil Synd. No. 1 Henderson, 2 mi. SW Bryson, A. S. Ensworth Sur., Abst. 1789. T.D. 3,002 ft.; C.O.

Panhandle Ref. Co. No. 1 D. R. Sewell, 4 mi. E of Bryson, Mary Hamilton Sur., Abst. 262. Sd. 3,049-62 ft.; shot with 10 qts.; fag. tools.

Perren & Gillespie No. 1 Clayton Bros., 330 ft. from N and 2,226 ft. from W line of lease in L. Knight Sur., Abst. 324, 2 mi. NE Bryson. Drlg.

Taubert & McKee No. 1 Eatherly, 3 mi. NW of Gibbtown, SE cor. county. J. H. Henderson Sur., Abst. 1749. Spd. and S.D.

R. A. Westbrook No. 1 W. Knox, sec. 83, B.B.B.&C. Sur. S.D. 3,775 ft.

Joe Worsham et al No. 1 Cash, 3½ mi. NE of Bryson, I. White Sur., Abst. 895. T.D. 3,210 ft.; drlg. by tools.

Jones County

Butler & Horne No. 1 Mrs. R. Cox, 6 mi. E Hamlin, 703 ft. E and 742 ft. S of NW cor. sec. 3, G.H.&H. Sur. Loc.

Chartier O. & G. Co. No. 1 City of Stamford, E edge Lueders. O.W.D.D.; drlg. 1,825 ft.

Fain, McGaha & Roberts No. 1 Daugherty, 2 mi. S Sandy Ridge pool, 220 ft. from N and W of SE¼ sec. 37, T.&P. Sur., Blk. 15. Loc.

Fain & McGaha Oil Corp. No. 1 Francis Olson, 3 mi. NE Avoca, sec. 190, B.B.B. &C. Sur. Fsg. tools 1,356 ft.

Fain & McGaha Oil Corp. No. 1 Minter, 3 mi. NW Hawley, Lot 12, Robt. Smith Sur. No. 192. S.D. 2,319 ft.

Farris & Ungren & Frazier No. 1 Ida Nolan, 2 mi. E of Stamford, sec. 3, B.B.B. &C. Sur. Rign. up.

Iron Mountain and Humble No. 2 Jones & Stasney, 3 mi. NE of Avoca, sec. 196, B.B.B.&C. Sur. Drlg. 600 ft.

Kleiner & Brown, Eagle Oil Co. No. 2 Fields, 220 ft. from N and 1,020 ft. from W line of farm in Samuel Andrews Sur. No. 191, 3½ mi. E Hawley. Moving in.

M. A. Mead No. 1 H. Osment. S.D. 500 ft.

Murray & Harrison et al No. 1 Little, 3½ mi. NE Avoca, sec. 172, B.B.B.&C. Sur. Fsg. tools 3,050 ft.

Oil States Expl. Co. No. 1 Olson, 4 mi. N Avoca, sec. 182, B.B.B.&C. Sur. Loc.

W. H. Peckham No. 1 Davis et al, 3 mi. SW Lueders. Subd. 8, F. M. Smith Sur. No. 3. S.D. 2,085 ft.

Riddle et al No. 1 J. D. Freeman, 8 mi. SW Anson, sec. 6, T.&P. Sur., Blk. 17. T.D. 2,487 ft.; rng. 5-in.

Roeser & Pendleton No. 1 Rosenquist, 4¼ mi. NE of Avoca, sec. 181, B.B.B.&C. Sur. Drlg. 1,350 ft.

Shaheen Oil Co. et al No. 1 Jenson, 2 mi. E of Avoca, sec. 198, B.B.B.&C. Sur. T.D. 1,280 ft.; rng. 10-in.

Southern Oil Co. No. 1 B. W. Thane NE cor. County. Andrew Jones Sur. 114. Drlg. 1,800 ft.

Stanton & Miller No. 1 Gaither, 4½ mi. N of Anson, sec. 38, B.B.B.&C. Sur. S.D.

A. G. Swanson No. 1 Manley, 7 mi. S Nugent, sec. 46, T.&P. Sur., Blk. 14. T.D. 1,918 ft.; underreaming 5-in.

Felmont & Adams No. 1 Woodson, 1½ mi. SE Avoca, sec. 200, B.B.B.&C. Sur. Spud and S.D.

Ungren & Frazier et al No. 1 Carl Ecdahl, 3½ mi. NE Avoca, sec. 188, B.B.B.&C. Sur. Drlg. 1,550 ft.

Ungren & Frazier No. 1 Melton, 4½ mi. SW Hawley, John Winters Sur. U.R. 8¼-in. 2,140 ft.; drlg. 2,360 ft.

Ungren & Frazier & West No. 1 Southard, 3 mi. SE Avoca, sec. 202, B.B.B. &C. Sur. Rng. 8-in. 1,739 ft.

C. E. Waite, Trust, No. 1 Ray, 3½ mi. SE of Stamford, sec. 7, D.&D.A. Sur. Mach.

Palo Pinto County

W. H. Clement No. 1 Federal Life Ins. Co., 2 mi. W Mineral Wells, sec. 51, T.&P. Sur., Blk. A (E of B). S.D. for pipe 400 ft.

Bill Cole et al No. 1 J. W. Harris Est., NW cor. county, De La Garza Sur. Drlg.

Paul Garrett No. 1 Mabry heirs, NE cor. county, sec. 2,572, T.E.&L. Sur. S.D. 470 ft.

Henry Hobbs et al No. 1 Bessie Holt, 4 mi. S. Graford, sec. 1,783, T.E.&L. Sur. S.D. 200 ft.

Lone Star Gas Co. No. 1 Hart Oil Corp., CWL county, sec. 19n, T.&P. Sur., Blk 3, 4,000-ft. test. Drlg. 2,175 ft.

Earnest Lloyd et al No. 1 Bailey, 3 mi. NE Graford, sec. 2,003, T.E.&L. Sur. S.D. 1,802 ft.

Shackelford County

M. P. Moore et al No. 1 Geo. Gray, W side Bluff Creek pool, sec. 208, E.T.R.R. Sur. L. 1,813-16 ft.; U.R. 6⅝-in.

Owens-Snebold Oil Corp. No. 1 Haterius, sec. 163, B.B.B.&C. Sur. Drlg. 825 ft.

Pardue et al No. 1 M. Davis, 5 mi. S Bluff Creek pool, 220 ft. from S and E of sec. 20, T.&P. Sur., Blk. 13. Loc.

Stephens County

Barnett Pet. Corp. No. 1 J. Q. Corbett, 4 mi. SE Ivan, sec. 3, S.P.R.R. Sur., Blk 3. Marble Falls 3,994-95 ft.; est. 10,000,-000 ft. gas; P.B.P.

Clark & Cowden et al No. 2 Echols Heirs, Blk. 3. S.D. 4,017 ft.

Cox & Caprito No. 1 Donnell, 1 mi. SW Eliasville, sec. 1,208, T.E.&L. Sur. Sand 2,956-74 ft.; drlg. 3,250 ft.

Dean Bros. & Fortex Oil Corp. No. 1 Watson, 5 mi. SW Caddo, sec. 28, T.&P. Sur., Blk. 6. T.D. 2,095 ft.; rng. 5-in.

W. B. Hamilton No. 1 B. O. Grant. CWL of county, sec. 63, B.A.L. Sur. 2,500-ft. test; drlg. 1,602 ft.

O. J. Perren No. 1 J. K. P. Hughes, NE cor. County of NW¼ sec. 6 A.B.&M. Sur., Abst. 2683. C.O. 1,500 ft.

Stonewall County

General Crude Oil Co. No. 1 W. J. Bryan, 7 mi. N Hamlin, Subd. 10, Wm. Vardeman Sur. No. 347. Sd. 4,347-52 ft.; T.D. 4,372 ft.; P.B. to 3,509 ft.; recementing.

General Crude Oil Co. No. 1 B. F. Harrison, NW cor. D. Harcrow Sur., 1½ mi. N of No. 1 Bryan. Drlg. 1,985 ft.

Tarrant County

E. E. Hoffpauir et al No. 2 W. H. Davis 2 mi. S Arlington, H. Blackwell Sur S.D.O. 2,140 ft

Taylor County

Louis Davis No. 1 E. Lincicum, NE cor county, sec. 21, B.A.L. Sur. Drlg. 2,060 ft.

A. Findley No. 1 Bowles Est., NE cor. county, 389 ft. from E and 608 ft. from S of sec. 26, B.A.L. Sur. Drlg. 1,460 ft.

Throckmorton County

G. C. Foster No. 2 Brown, 5 mi. NW Woodson, sec. 920, T.E.&L. Sur. S.D. 1,215 ft.

Wise County

Latex Oil Co. No. 1 Smith, 3 mi. E of Bridgeport, Jas. Couch Sur. T.D. 4,075 ft.; testing.

Canadian Fields

CHATHAM, Ontario, Sept. 25.—In the southwest extension of the Turner Valley field, Brown Oil Corp. No. 1, LSD 14, section 16-18-2w5, completed 470 feet in the Madison limestone at 6,814 feet, is testing production. The hole was tubed and cleared of rotary fluid by swabbing. The well blew in with indications of a good flush production, estimated 1,000 bbls. a day, but the flow choked off, apparently due to lack of gas pressure. Tubing adjustments were made and gas piped from a nearby well to supplement the natural pressure. A settled production of 400 to 500 bbls. is likely, but no official estimates have been given out pending completion of the tests. This completion extends the proven field a half mile south and a little west of Westside Royalties No. 1, LSD 3, section 21-18-2w5, which was previously the most southerly producer. It brings the potential production of Turner Valley up to around 12,500 bbls. a day.

In section 21-18-2w5, Davies-Royalite No. 2, LSD 13, completed in the Madison limestone at 6,965 feet, esttled to 2,144 bbls. a day of 44.7-gravity crude. Under 65 per cent proration it has been averaging around 1,396 bbls. It is the largest producer yet completed in Turner Valley. Royalite Oil Co., which handled the drilling, has a half interest.

Tests in the Lime

In West Central Turner Valley, Mercury Oils No. 8, LSD 3, section 4-19-2w5, is below 5,800 feet and more than 300 feet in the Madison.

In section 20-18-2w5, Brown Oil Corp. No. 2, LSD 8, is below 6,816 feet after getting the Madison at 6,527 feet.

In section 29-18-2w5, Granville Oils No. 1, N half LSD 16, is below 6,980 feet. It got the Madison limestone at 6,870 feet and cemented casing at 6,887 feet. Share Royalties No. 1, N half LSD 8, same section, which got the lime at 6,729 feet, is below 6,793 feet.

In section 28-18-2w5, Model-Spooner-Reward No. 1, LSD 4, which got the Madison at 6,461 feet, is deepening below 6,520 feet after cementing casing.

In the southwest extension of the field, Prairie Royalties No. 1, LSD 16, section 17-18-2w5, got the Madison limestone at 6,830 feet and cemented casing at 6,842 feet. Location is a quarter mile west and slightly north of Brown Oil Corp. No. 1 producer, and the lime was encountered only 16 feet lower, indicating a possible flattening of the structure toward the south.

West Side Drilling

In section 32-18-2w5, Royal Crest Petroleums No. 1, LSD 9, is below 6,401 feet. West Turner Petroleums No. 1, LSD 2, is below 1,888 feet.

In section 28-18-2w5, Three Point Petroleums No. 1, LSD 12, is below 6,185 feet.

Four Star Petroleums No. 1, LSD 13, is below 6,591 feet.

In section 29-18-2w5, Commoil No. 1, LSD 15, is below 6,951 feet with some traces of crude. It is expected to get the lime within a few days. National Petroleum Corp. No. 1, S half LSD 8, is in the Lower Fernie shales below 6,630 feet and getting close to the Madison contact.

New Royalite Test

In section 32-18-2w5, Royalite Oil Co. No. 28 has been located in LSD 16, offsetting Royalite Oil Co. No. 3 Sterling-Pacific to the west. Preliminary work has been commenced on the site.

Okalta Structure

On the Okalta fold, west of the crude area, Okalta Oil Co. No. 6, LSD 3, section 30-18-2w5, is below 1,632 feet.

Farther west, South End Petroleums No. 1, LSD 6, section 36-18-3w5, is cementing cavings at 5,500 feet. It is still in the Fernie shales, but believed close to the Madison limestone, where production is expected.

North Turner Valley

Home Oil Co. No. 1 Millarville, LSD 8, section 33-20-3w5, is below 5,840 feet and will probably be the first completion on the west flank of North Turner Valley.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co. No. 1 McLaren, LSD 12, section 13-31-10w5, is in softer formation below 8,217 feet.

On the Duncan structure, Spindletop Oils No. 1, LSD 4, section 1-30-6w5, is working on casing at 1,600 feet.

On the Kootenay dome west of Calgary, Roxana Petroleums No. 1, section 8-24-

(Continued on Page 106)

PERSONAL

WALLACE E. PRATT, member of the executive committee of the Standard Oil Company of New Jersey, New York, and formerly vice president of the Humble Oil & Refining Company, Houston, Tex., witnessed the christening of the "Wallace E. Pratt" tanker in New York last week.

CHARLES C. MILLER, Belle Fourche, S. D., and Casper, Wyo., drilling contractor, who grew up with the oil industry in Venango County, Pennsylvania, is visiting scenes of his youth in Pennsylvania. Mr. Miller's father, the late DAVID MILLER, was a pioneer in Oil Creek operations. Charles Miller was born near Oil City, Pa., and at the age of 15 years began dressing tools for drilling contractors. His grandfather, "DOC" HAGGERTY, was one of the first victims of a nitroglycerin explosion, losing his life at Pithole. His father-in-law, JOHN SHREFFLER, of Nickleville, Venango County, was one of the first rig builders.

JAMES C. DAWSON, formerly chemist with the Waverly Oil Works, Pittsburgh, Pa., is now with the Pate Oil Company, Milwaukee, Wis.

H. E. CHRISTENSEN, district geologist for the Texas Company in Wichita, Kans., who was criticially ill, was reported recovering this week.

C. F. BOWEN, chief geologist for the Standard-Vacuum Oil Company, has returned to his New York office after spending six months in the Orient.

GEORGE CALVERT and BERT WEEKLEY, independent operators of Fort Worth, Tex., are on a big game hunt and trout fishing expedition in the Pacific Northwest.

G. E. DORSEY has resigned as superintendent of the Socony-Vacuum Oil Company, Inc., production department in New York. His successor has not been appointed.

C. W. BEIBEL, supervising engineer of the United States helium plant at Amarillo, Tex., has received the honorary degree of doctor of science from the Texas Technological College in Lubbock, Tex.

R. W. BOND has been named production manager by the Shell Petroleum Corporation for its Mid-Continent area. He formerly was division manager in Kansas. His headquarters will be in Tulsa.

H. SMITH CLARK, chief geologist for the state of Texas, accompanied by WILLIAM T. THOMAS, division geologist from Houston, Tex., was in Tulsa last week conferring with Sinclair Prairie Oil Company officials.

VALENTINE M. KIRK, of Cody, Wyo., president of the Kirk Oil Company and the Park Refining Company, was elected president of the newly organized Wyoming Chapter of the Independent Petroleum Association of America. E. J. SULLIVAN, Casper, Wyo., president of the E. T. Williams Oil Company, was elected vice president, and GEORGE W. JARVIS, Casper, manager of the Wyalta Oil Company, secretary-treasurer.

ARTHUR G. LEVY has joined the Crown Central Petroleum Corporation, Houston, Tex., as manager of the production department. Mr. Levy will have supervision over the land, lease, drilling and production activities of the company. He was formerly in the engineering department of the Texas Company in Houston, later being transferred to Shreveport, La., where he became chief division engineer for the company in Louisiana, Arkansas and East Texas.

HAROLD G. BARTON, who has been serving as deputy supervisor of the United States Geological Survey at Taft, Calif., has been transferred to Washington, D. C., where he will be stationed for three years. His former position has been taken by HARRY V. MOFFATT, who was from Casper, Wyo.

DR. HEINRICH KOPPERS, engineer and industrialist of Essen, Germany, who as a pioneer in the chemistry of coke spurred the world-wide development of the products of coal and coal-tar, and for whom the Koppers interests in the United States are named, was expected to arrive in Pittsburgh, Pa., Tuesday of this week for a visit with his former associates. Doctor Koppers, on landing in New York, was to be met at the boat by DR. JOSEPH BECKER, vice president, and JOSEPH VAN ACKEREN, also an official of the Koppers Company, and taken by motor to Pittsburgh. While in Pittsburgh the noted German was to be guest at a luncheon given by his old associates at the Duquesne Club, and visit the new building of Mellon Institute which has conducted coal-tar researches. Doctor Koppers plans to remain in the United States for at least two weeks, visiting industries in Detroit, Chicago and other cities.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Thomas A. McLaughlin, in the employ of the Standard Oil Company since 1887 retires as oil purchasing agent for the Ohio Oil Company at Lima, Ohio, and is succeeded by A. D. Sutton.

John G. Jennings, 66, of the firm of Jennings Brothers, oil producers and bankers, dies at his home in Pittsburgh, Pa.

The largest producing field in California is Coalinga with an average of 54,172 bbls. a day in the past month.

20 YEARS AGO

Former Congressman "Alfalfa Bill" Murray is a candidate for governor of Oklahoma, and one of his promises is "more freedom for oil men."

William J. Young, 72, retired oil producer, and member of the firm of Vandegrift, Young & Company, which merged to form the Forest Oil Company, later to become the South Penn Oil Company, dies in New York. He was manager of South Penn for 15 years.

A. C. Bedford and Sir Hugh Black are in the Mid-Continent field looking over the petroleum supply situation in connection with United States and Allied fuel needs to win the World War.

10 YEARS AGO

Production of the United States is 2,526,985 bbls. per day. Too much oil!

Nineteen wells in the Yates, Texas, field, each given an hour's flow in a proration test, gauged a total of 6,935 bbls.

Mrs. Alex McCoy, wife of a vice president of the Marland Oil Company, dies in Denver, Colo., after an illness of five months duration.

Retail gasoline price of gasoline in Tulsa is 18 cents per gallon including a 3-cent tax.

W. H. Spain, 82, for years a director in the Oil Well Supply Company, with which he was connected for 45 years, dies in Denver, Colo.

M. G. MILLER, chief clerk in the Tulsa office of the Texas Company, is back from a vacation in Colorado.

JOHN CLAYTON, geologist for the Gulf Oil Corporation, is recovering from a recent operation in the Spohn Hospital, Corpus Christi, Tex.

HARRY LEE CROCKETT, of Oklahoma City, has been appointed to the geological department of the Ohio Oil Company, with headquarters in Wichita, Kans.

C. D. ROBINSON, of the Arkansas Fuel Oil Company, has been placed in charge of the new McAllen, Tex., office of the company. He will be assisted by J. P. JONES.

CLARENCE L. DUNN, resigned as research engineer for E. I. du Pont de Nemours & Co., Inc., to become associated with the Shell Development Company, Emeryville, Calif.

WILLIAM BENNETT TURNER, weighing 8½ pounds upon his arrival, is a newcomer in the home of FORD TURNER, assistant to the head of the land department of the Pure Oil Company in Fort Worth, Tex.

P. H. HILL, formerly superintendent of gas and liquid measurement for the General Petroleum Corporation in Los Angeles, Calif., has accepted a position as engineer for the Smith Meter Company in the same city.

DR. PAUL V. McKINNEY, formerly with the Phillips Petroleum Company, Bartlesville, Okla., has been appointed senior fellow on the Texas Gulf Sulphur Company Fellowship at the Mellon Institute of Industrial Research in Pittsburgh, Pa.

PARAGRAPHS

ELMER FREDERIC SCHULDT, assistant superintendent, central district, the Peoples Gas Light & Coke Company, Chicago, was honored Wednesday of this week at the annual convention of the American Gas Association in Cleveland, Ohio, for contributing the best technical paper to association meetings throughout the year. Mr. Schuldt received the Beal medal for his paper, "The Precision Method of Locating Gas Leaks." The award, established by the family of the late W. R. Beal, consists of a bronze medal and substantial cash payment.

LEE R. COWLES, 20 years in the oil industry and railroad business, has been appointed a new assistant traffic manager of the Standard Oil Company (Indiana). He started with the Western Trunk Line committee at the age of 20, and later took a position with the Chicago, Rock Island & Pacific Railroad in the traffic department. A member of the Missouri Bar Association and a practitioner before the Interstate Commerce Commission, Mr. Cowles is experienced in rate adjustments and matters pertaining to distribution and transportation of oil by pipe line, rail and water, particularly in the territory served by the Standard of Indiana.

R. H. FELTNER, independent oil operator of San Antonio, Tex., is in California on vacation.

VOLLY B. NELSON announced the arrival of VOLLY B., JR. Mr. Nelson is in the engineering department of the Sinclair Refining Company in Houston, Tex.

H. A. SMITH, formerly branch manager of the General Petroleum Corporation of California's sales department in Saticoy, has been appointed branch manager of the sales department in Santa Barbara.

FRANK HAWKS, head of the aviation department of the Texas Corporation, is visiting relatives in Fort Worth, Tex. He will fly from there to Hollywood, Calif., where he is to make a motion picture serial.

PHILIP JORDAN, of Chase, Kans., left last Saturday for Miami, Fla. From that city he and C. L. WILLIAMS, of Tulsa, will fly to Venezuela, where both will enter the service of the Standard Oil Company of Venezuela, subsidiary of the Standard of New Jersey.

FOSTER DEE SNELL, president of Foster D. Snell, Inc., Brooklyn, N. Y., was elected president of the New York professional chapter of Alpha Chi Sigma. R. E. HORSEY was chosen vice president, E. R. HANSON secretary and H. N. La CROIX treasurer.

JOHN D. GLASS has resigned as chief investigator for the federal tender board in Kilgore, Tex., to enter law practice in that city. EDWARD W. CHATTERTON, now special agent in Kansas for the PWA, has been appointed by the department of the interior to succeed Mr. Glass.

ARNOLD J. WEIDEMAN, Mount Pleasant, Mich., Isabella County member of the lower house of the state legislature, has been made executive secretary of the Oil and Gas Association of Michigan. He succeeds HENRY G. HUNT, of Saginaw, who resigned to join the staff of the Lupher Drilling Company. Mr. Weideman has been connected with the petroleum industry since 1909, when he joined the production division of the Standard Oil Company of California in San Francisco. Since then he has worked in most of the country's major fields. He went to Michigan at the time of the Saginaw oil strike in 1925 and since 1930 has been located at Mount Pleasant. He was an independent operator and was elected assistant proration referee for the Porter and Crystal fields. It is understood Mr. Weideman does not intend to resign his legislative post, as much of his work in the new office has to do with legislation under consideration at the state capital.

H. R. CULLEN and family have returned from a vacation trip in Europe. Mr. Cullen is president of the Quintanac Petroleum Company at Houston, Tex.

J. C. BOLINGER, design engineer in the General Petroleum Corporation engineering department in Los Angeles, Calif., has left for New York for a stay of three months. His headquarters will be in the New York office of Socony-Vacuum Oil Company.

GEORGE KIPP, JAMES BROWN, WILLIAM KIPP, LLOYD KIPP, HENRY KUKA and STUART HAZLETT, all of Browning, Mont., have been active in the organization of the Blackfeet Cooperative Association. The association is expected to be an active figure in the oil development of the Blackfeet Indian reservation in Montana. It bid in four tracts at a recent sale. It already has 12,000 acres of potential oil land.

Scout to Superintendent

L. H. True, general superintendent of the Texas, Louisiana and Arkansas division of the Magnolia Pipe Line Company, is one of the growing number of men for whom a position as scout has been a springboard by which to jump higher. He joined Magnolia in 1921 as a timekeeper, first on the Corsicana-Beaumont line and then at Smackover. Shifted to Oklahoma in 1923, he worked as timekeeper and material checker and after that as oiler in the Burbank station. Back to Texas, he was a gauger during the Powell boom; and 1924 saw him once more in Burbank, where he put in about two years before going to Archer County, Texas, as district gauger. In 1927 he was moved to Crane County, Texas, and in 1929 to Winkler County, in each place serving as district gauger. In 1932 he was made pipe-line scout. During the two years he filled that position his superiors recognized his fitness for more responsibility, with the result that he was promoted to superintendent of the Luling-Mirando district. In March, 1936, he was advanced to his present post.

L. H. TRUE

Mr. True was born in Bell County, Texas, moving later to Ellis County, where he passed his schooldays. He married Miss Rose Sullivan, of Odessa, Tex., in 1930 and they have two children. A big buck head in his office is evidence of his success as a hunter.

CHARLES YOUNGBLOOD, purchasing agent for the Gulf Oil Corporation in Fort Worth, Tex., is hunting in Wyoming with a group of other oil men from Texas.

HENRY ROSENTHAL, independent oil producer of Wichita, Kans., has returned to his home from southern California, where he went early in the summer for his health.

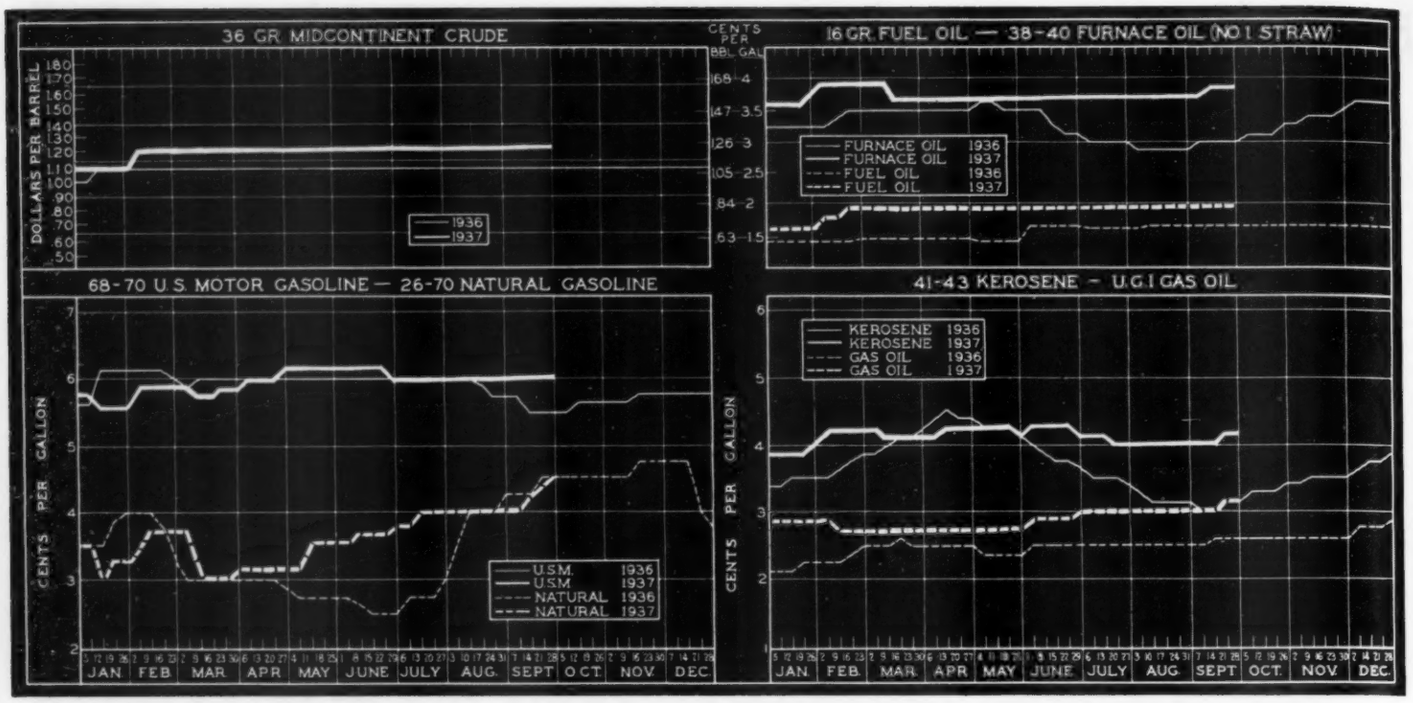
A. L. AROUS, in the producing department of the International Petroleum Company, Talara, Peru, has returned to South America after spending several weeks in the United States.

JOHN WHITNEY LEWIS, formerly of Dallas, Tex., and now residing in Trujillo City, Dominican Republic, where he is doing geological work for the Seaboard Oil Corporation, is visiting relatives and friends in the United States.

THOMAS B. SCOTT, JR., formerly assistant to the president of the Carter Oil Company, has opened an office for the Brookhaven Oil Company in the Thompson Building, Tulsa, as an independent operator in the producing division.

S. M. BENAVIDES, deputy supervisor for the Texas Railroad Commission, has been placed in charge of the commission's new office in McAllen, Tex. Increasing valley oil operations will be directed from the McAllen office.

C. A. P. SOUTHWALL, of the Anglo-Iranian Oil Company producing department, spent last week in New York City. He probably will visit the Gulf Coast district of Louisiana and Texas before returning to his home office in London, England.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Light Fuels Strong in Group 3 Area as Cool Weather Increases Demand

By D. H. STORMONT

Pronounced strengthening of the light distillates was readily evident in the Group 3 market this week as cooler weather brought to the attention of buyers the fact that their stocks were not sufficiently large to care for the replacement demand that will accompany the first cold spell. And, as a result many dealers were scurrying around in search of material to augment their supplies. Some jobbers who had been out of the market for several weeks, feeling that it was too much of a sellers market and not wishing to add fuel to the fire, were reentering the market. Several refiners reported they were behind in shipments, and buyers who asked for more than their contracts allowed, in some instances were meeting with refusals. Movement of these oils, however, was not overly large as most of the buying was by small jobbers and as a result refiners kept their inventories substantially intact. Prices of the various grades were unchanged this week.

Gasoline Movement Good

Contract movement of gasoline continued at levels only slightly below that of August, according to several refinery sales managers. Spot buying, however, as was to be expected, was beginning to show the seasonal influence of declining tourist trade. The majority of the trade was apparently well pleased with the showing tankcar gasoline made during September, for although the market was admittedly easier than in August only very little material was reported to have moved at prices under those posted. Refiners are now beginning to cut back their daily crude runs to offset the diminishing demand for motor fuels so that stocks will probably show no appreciable gain for several weeks, barring an unusually early winter.

Third grade gasoline was somewhat weaker this week. Many motorists during the summer months operate their cars entirely on third grade fuel or on a blend of third grade and regular grade. Cooler weather has now forced them to forego this economy, due to the lower volatility of the third grade material. The weakness in the third grade market, however, does not exert the pressure it formerly did on the regular grade market since only a relatively small amount of third grade is now being consumed. And, as each year sees more and more of the old low-compression automobiles headed for the junk heap, the relative percentage of third grade consumed should continue to decline.

Heavy demand of natural gasoline by northern refiners eliminated the one-eighth cent differential that has existed between North Texas and Oklahoma prices since the middle of July. Movement of naturals to the Gulf Coast has kept the North Texas market in a very firm condition for some time, and now as buying by northern refiners picks up the Oklahoma market is feeling the greater part of the demand. Especially so, since both the North Texas and Oklahoma plants were reported to be practically sold out.

Bright Stocks Lowered

A further drop in bright stock prices was posted last week following a price recession in the Pennsylvania material. The lubricant market, however, was reported to be in good condition and the demand good; thus the decrease in bright stock prices was made only to keep Group 3 prices in line with those posted by Pennsylvania refiners. Inventories of bright stocks held by Mid-Continent refiners are in good shape following a substantial decrease in August. Demand of neutrals was reported to be fair.

Demand for heavy fuel oils was picking up and kerosene was a little firmer, owing presumably to cooler weather in northern sections. The heavy consuming season for tractor fuels is now over, but a demand for them still continues and is expected to be prolonged till the close of the late plowing season. Wax continued in good demand.

Refined Oil Market Barometer

Although the outlook for some divisions of the refined oil market were not clearly defined, especially that of gasoline, it is generally regarded as promising with furnace oils being the sparkplug of the group. Further reductions in bright stock prices were made in both Pennsylvania and Mid-Continent markets. Heavy buying by northern refiners tightened the natural gasoline market.

MID-CONTINENT. Naturals strong. Little change in gasoline. Fuels gaining strength.

EAST COAST. Tankcar gasoline firmer. Furnace oils gathering strength.

GULF COAST. Fuel oils strong and scarce. Kerosene firm. Gasoline weakening.

CALIFORNIA. Gasoline firm. Naturals steady. Fuel and diesel oils strong.

PENNSYLVANIA. Kerosene strong. Bright stocks weak. Wax down.

CHICAGO. Gasoline spotty. Heating oils firm. Heavy fuels draggy.

Purchases by Japanese and Domestic Heating Oils Were Market Features

By H. STANLEY NORMAN

NEW YORK, Sept. 28.—Activity of the Japanese government in the Gulf Coast, Pacific and foreign oil markets easily featured developments in the trade last week although heating oils captured the spotlight in domestic business.

A total of 25 tankers have been reported fixed by the Japanese government for loading the last of this month and during October on the Pacific Coast, on the Gulf Coast and in foreign petroleum refining centers. Duty for which the vessels are intended is about equally divided between high-quality gasoline, doubtless for aviation purposes, and fuel oil meeting Navy specifications. A smaller amount of diesel oil and kerosene is in prospect for sale and delivery to Japan, according to an analysis of inquiries placed with boat owners in which gravities are specified.

Two weeks of temperature which has required various degrees of heating of homes, apartment houses and less frequently office buildings in this area have boosted domestic burning oils to the top of the list in interest. Business in the heating oil trade developed so far has been insufficient to materially alter basic conditions, but scores of jobbers tardy in filling their storage for the winter have been active in placing shipping instructions. The present market cannot be classified as more than firm, but is leaning toward the strong side and is in position to move ahead as soon as more extensive heating requirements develop.

There are still occasional reports that kerosene (No. 1 fuel oil) can be obtained in tankcars in New York for 6⅛ cents per gallon, but the supply is definitely limited and some traders said they were unable to locate material at this figure. Large suppliers are still quoting 6.3 cents per gallon for kerosene and report that business is satisfactory. No. 2 and No. 4 fuel oils are generally quoted at 5¼ cents per gallon in tankcars for New York and New Jersey delivery. Information was spread in New York last week that the No. 2 fuel oil situation on the Gulf Coast is exceptionally tight for this season of the year and that 4⅜ cents per gallon is the price quoted by refiners in position to supply quantity. Some traders report that No. 2 fuel oil is still available in certain directions on the Gulf Coast at 4¼ cents per gallon, but nearly all are agreed that the higher figure will probably be the minimum within a few weeks.

There appears to be little change over the past three or four weeks in the retail fuel oil situation although some of the "peddlers" who offered concession prices in an effort to capture early season business are now reported out of the market. Due to their inability to replace supplies at the low of summer prices, the minor dealers probably will be reduced to a negligible factor in the market for the remainder of the winter. Tank-wagon prices on No. 2 fuel in metropolitan New York and Westchester County range from 6¾ cents to 7½ cents per gallon.

Some improvement in the retail gasoline price structure in metropolitan New York has been accomplished during the past week, but conditions remain unsettled in New Jersey. The improvement in New York has been only partial, however, and Manhattan stations and dealers in the Bronx and Queens are posting 98 cents for 5 gallons, including taxes. Prior to the turn of the week most stations were quoting 6 gallons for 98 cents, including taxes. In Brooklyn, the general posting is $1.11 for 6 gallons of regular gasoline. The improvement in metropolitan New York probably is due to a slight stiffening of the tankcar market which now generally ranges from 7½ to 7¾ cents per gallon for 65 octane motor fuel. A little business can be done, according to reports, at a shade under 7½ cents per gallon on firm bid, but previous offers of motor fuel at 7¼ cents per gallon and a shade lower are no longer a factor in the market.

On the Gulf Coast, Grade C bunker fuel oil is generally quoted at 87½ to 90 cents per barrel, while the New York harbor figure of $1.35 per barrel is unchanged. That consumption of Bunker C fuel oil will probably hold materially above recent past winter levels is indicated in the program of the major steamship lines. For example, the French Line last week announced that it would use every vessel in its fleet for cruises over the winter to Caribbean and other tropical waters. The cruise program includes a voyage from New York to Buenos Aires by the line's flagship "Normandie."

Kerosene is particularly active in western Pennsylvania where the tankcar price is generally quoted at 5⅛ cents per gallon. Several refiners in that section are out of the market for duration of September and in some instances orders booked ahead will engage their manufacturing capacity until the middle of October.

In contrast, bright stocks are sluggish and the bulk of current movement is confined to inter-refinery transactions. It was reported late last week that traders are inquiring for a full cargo of Pennsylvania lubricating oil for export shipment in October, but this development had not been reflected in the market at the end of last week. The market for bright stock continues to range from 20 to 25½ cents per gallon. The cylinder oil market is also unchanged with a range of 13½ to 17½ cents.

Despite the scattered spots of unhealthy conditions in the retail motor fuel and heating oil markets in the northeast, the general undertone is regarded as satisfactory in view of the season. Gasoline demand is holding comfortably above previous September levels, but is showing some contraction from the midsummer peak. On the other hand, heating oil requirements have not reached sufficient proportion to take up the slack created by the curb in gasoline consumption.

The American Legion convention in New York last week placed unusual call on refiners, jobbers and distributors in and near this city and probably contributed considerably to the partial improvement in retail and tankcar prices. Demand was reported improved from barge-lot purchasers in the New York harbor district at the end of the week.

Tanker rates from the Gulf Coast appear to be unchanged. A vessel was chartered last week for October gasoline movement from the Gulf to north of Cape Hatteras for 32 cents per barrel. An export cargo of gasoline and kerosene was reported sold on the Gulf Coast last week to German traders, but price and volume details were lacking. One factor contributing to dullness in the export market is the scarcity of gas oil of proper specifications on the Gulf Coast.

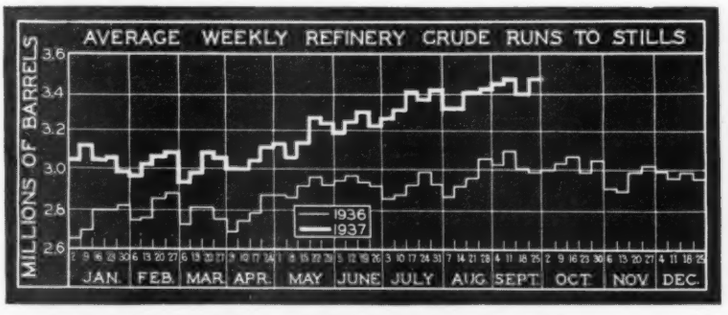
Exclusive of the concerted chartering of tankers by Japan, the seasonal requirements for moving fuel oil from the Gulf Coast to North Atlantic points of consumption probably will stiffen tanker market without outside developments.

A. P. I. Weekly Refinery Statistics

Week Ending September 25, 1937

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	552,000	18,630,000	15,262,000
Appalachian	88.4	112,000	2,617,000	926,000
Indiana, Illinois, Kentucky	92.4	454,000	10,238,000	7,158,000
Oklahoma, Kansas, Missouri	84.7	307,000	6,073,000	3,718,000
Inland Texas	56.6	142,000	1,706,000	1,730,000
Texas Gulf	95.7	780,000	7,701,000	10,141,000
Louisiana Gulf	96.6	131,000	1,749,000	3,170,000
North Louisiana and Arkansas	63.7	45,000	400,000	389,000
Rocky Mountains	69.7	51,000	1,266,000	737,000
California	90.9	582,000	11,690,000	69,911,000
Total reported	89.0	3,156,000	62,070,000	113,142,000
Estimated unreported	.....	299,000	3,550,000	3,330,000
*Estimated total	.....	3,455,000	65,620,000	116,472,000
*Estimated total previous week	.....	3,400,000	66,057,000	116,178,000
*September 26, 1936	.....	2,990,000	56,472,000	112,504,000

*Bureau of Mines, currently estimated.



Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATES)

Week ending September 11, 1937	309,054,000 barrels
Week ending September 4, 1937	310,417,000 barrels
Week ending September 12, 1936	297,962,000 barrels

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of September 28, 1937

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wag.	Dlr.	Inc. tax	tank-wag.
Chicago, Ill.	15.5	13.5	4.0	10.1
Decatur	15.5	14 0	4.0	10.1
Joliet	15 5	14 0	4 0	10.1
Peoria	15 5	14 0	4 0	10.1
Quincy	15.3	13 8	4 0	9.9
Davenport, Ia.	15.5	14 0	4.0	‡13 1
Des Moines	15 3	13 8	4.0	‡12 9
Mason City	15.7	14.2	4 0	‡13 3
Sioux City	15 5	14 0	4 0	‡13 1
Duluth, Minn.	17 3	15.8	5.0	10.9
Mankato	16.9	15.4	5.0	10 5
Twin Cities	16 9	15.4	5 0	10.5
Lacrosse, Wis.	16.9	15 4	5 0	10 5
Green Bay	17 2	15.7	5.0	10.8
Milwaukee	16 8	15.3	5.0	10 4
Detroit, Mich.	15 4	13.9	4.0	9 8
Grand Rapids	16 5	15 0	4 0	10 9
Saginaw	16.3	14.8	4.0	8.5
Evansville, Ind.	17 0	15.5	5 0	†10 6
Indianapolis	17 2	15 7	5 0	†10 8
South Bend	17 4	15.9	5.0	†9 6
Fargo, N. Dak.	16 9	15.4	4 0	11.5
Minot	18 1	16 6	4.0	12.7
Huron, S. Dak.	17 3	15 8	5 0	10 9
Kans. City, Mo.*	14 9	13 4	4 0	8.0
St. Louis*	15 2	13 7	4 0	9 8
St. Joseph*	14.9	12.4	4.0	8.5
Wichita, Kans.	14.4	12.9	4.0	8.0

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Iowa kerosene prices include 3-cent state tax.

(Exclusive of state general sales taxes, except Indiana and South Dakota.)

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective Dec. 7, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.3 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex furnace oil, 1-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex A, 1-399 gallons, 5.75 cents; 400 gallons and over, 4.75 cents. Stanolex B, 1-799 gallons, 5.75 cents; 800 gallons and over, 4.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Atl'tic City, N. J.	13 5	12 0	4 0	9 0
Newark	13 5	12 0	4 0	9 0
Annapolis, Md.	15 6	14.1	5.0	9.5
Baltimore	15 0	13 5	5 0	9 0
Cumberland	17 4	14 9	5 0	10 0
Wash'g'n, D. C.*	12 5	11 0	3 0	9 5
Danville, Va.	18 2	15 7	6 0	12 9
Norfolk	17 0	14 5	6 0	11 5
Petersburg	17 3	14 8	6 0	11 7
Richmond	17 3	14 8	6 0	11 7
Roanoke	18 5	16 0	6 0	12 9
Charles'n, W. V.	17 8	15 3	6 0	12 6
Parkersburg	17 1	14 6	6 0	11 2
Wheeling	17 0	15 5	6 0	12 2
Charlotte, N. C.	19 4	16 9	7 0	12 6
Hickory	19 9	17.4	7 0	13 0
Mt. Airy	19 7	17 2	7 0	12 8
Raleigh	19 0	16 5	7 0	12 1
Salisbury	19 5	17 0	7 0	12 7
Charleston, S. C.	18 0	15 5	7.0	11.1
Columbia	19 0	16 5	7 0	12 1
Spartanburg	19.7	17.2	7.0	12.9

*Standard of N. J. has discontinued posting service-station prices at all above points except at Washington and Baltimore where station prices of 16.0 and 18.5 cents, respectively, are in effect.

Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5-cent per gallon.

Effective May 15, 1937, in North and South Carolina, West Virginia and Virginia (except Arlington and Fairfax counties): Commercial consumers taking deliveries of 50 gallons (W. Va., 100 gallons) or more at one time will be billed at posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons (W. Va., 100 gallons) will be billed at 4 cents per gallon over posted consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero.
	Tank wag.	Net dlr.	Inc. tax	tank-wag.
Atlanta, Ga.	22 0	19 0	7 0	*†12 0
Augusta	21.0	18 0	7 0	*14.0
Macon	21 5	18 5	7 0	*14 5
Savannah	19 0	16 0	7 0	*12 0
Birm'ham, Ala.	22 0	19 0	8 0	12 0
Mobile	22 0	19 0	9 0	11 0
Montgomery	22 0	19 0	9 0	14 5
Jackson, Miss.	21 0	18 0	7 0	*13.0
Vicksburg	20 5	17 5	7 0	*13 0
Jacksonville, Fla.	20 5	17 5	8 0	†10 0
Miami	20 5	17.5	8 0	†12 0
Pensacola	22 0	19 0	9 0	12 0
Tampa	20 0	17 0	8 0	10 5
Lexington, Ky.	20 0	17.0	6 0	11.0
Covington	19 5	16 5	6 0	11.0
Louisville	20 0	17 0	6 0	10.5
Paducah	20.0	17.0	6.0	10.0

Price basis to tank-wagon consumers: Effective January 4, 1937, 3 cents per gallon below tank-wagon price. Kerosene prices in all states subject to 2 cents discount except in Kentucky where prices are net.

*Includes 1-cent state tax. †Subject to 2-cent discount.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Dealer	Inc. tax	tank-wag.
Denver, Colo.	17 5	5 0	11.5
Grand Junction	20 0	5 0	15 0
Pueblo	16.0	5.0	10.5
Casper, Wyo.	18 0	5 0	11 5
Cheyenne	18 0	5 0	13 0
Butte, Mont.	19 5	6 0	15 5
Billings	21.0	6.0	15.5
Helena	21.5	6 0	15.5
Great Falls	21.5	6.0	15.5
Salt Lake, Utah	19 5	5 0	16 0
Twin Falls, Ida.	21 5	6 0	18 0
Boise	21.5	6.0	18.0
Albuquerque, N. M.	17.5	6.5	12.0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wag.	Di-vided con'r.	Inc. tax	tank-wag.
Ohio points	17.0	16.0	5.0	*13.5

*Includes state tax of 1 cent.

Discounts to commercial consumers, contract: Effective Aug. 12, 1937, for Ohio state-wide, 20,000 gallons or over per month, 1 cent per gallon off commercial consumer tank-wagon price. Tank-wagon price is price to commercial consumers in deliveries of 25 gallons or more; less than 25 gallons gets service-station price. Price to undivided dealers is same as to commercial consumers.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wag.	Dlr.	Inc. tax	tank-wag.
Omaha	17 9	16 4	6 0	10 4
McCook	18 0	14 0	6 0	10 0
Norfolk	18 3	16 8	6 0	10 8
North Platte	18.7	17.2	6.0	11.2
Scotts Bluff	19 4	15.9	6.0	11.9

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective Jan. 1, 1935.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
San Francisco	17 5	18 5	4.0	11.5
Los Angeles	17 0	18 0	4 0	9.0
Fresno, Calif.	18 5	19 5	4.0	12.0
Phoenix, Ariz.	21 0	22 0	6.0	‡16.0
Reno, Nev.	20 0	21.0	5 0	13 0
Portland, Ore.	20 0	21 0	6 0	13.5
Seattle, Wash.	20.0	21.0	6 0	13.5
Spokane	23 0	24.0	6.0	16.5
Tacoma	20.0	21.0	6.0	13.5

‡Includes 5-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Albany, N. Y.	15.0	13.5	5.0	9.0
*Met. N. Y.:				
Manh't'n, Br'nx	15 0	13 5	5 0	9.0
Staten Island	15 0	13.5	5 0	9 0
Q'ns & Brklyn	15 0	13 5	5 0	9 0
Buffalo	15 8	14 04	5 0	8 5
Rochester	15 5	14 17	5 0	8 5
Syracuse	15 5	14 12	5 0	9 5
Boston, Mass.	12 5	13 5	4 0	8 5
Portland, Me.	15 8	13 5	5 0	8.75
Manch'ter, N. H.	16 3	14 0	5 0	9 5
Burlington, Vt.	15.9	13.9	5.0	9.5

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Price basis to undivided dealer: Posted dealer tank-wagon price less .5 cent. Price basis to commercial consumer: Effective Nov. 15, 1936, monthly purchases of 25,000 gallons and over, consumer tankcar prices at delivery point plus .5 cent per gallon; monthly purchases of 5,000 to 25,000 gallons, undivided dealer price at delivery point: Monthly purchases under 5,000 gallons, pay divided dealer tank-wagon price at delivery point.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline		Kero.
	Dealer	Inc. tax	tank-wag.
Muskogee, Ok.	15 0	5 0	7 0
Oklahoma City	14 0	5 0	8 0
Tulsa	14 0	5 0	6 0
Ft. Smith, Ark.	15 5	5 0	10 0
Little Rock	18 0	7 5	9 5
Texarkana	15.5	5.0	8.5

Texas

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Dallas, Tex.	14 0	18 0	5 0	8.0
Fort Worth	14 0	18 0	5.0	8.0
Houston	14 5	18 5	5 0	8.0
San Antonio	14.5	18.5	5.0	8 0

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
N. Orleans, La.	20 5	18 0	*10 0	†13 0
Baton Rouge	18 5	16 0	8 0	12 0
Alexandria	19 0	16 5	8 0	12 0
Lafayette	19 5	17 0	8 0	13.0
Lake Charles	19 5	17 0	8 0	12.5
Shreveport	18 0	15 5	8 0	9.5
Knoxville, Tenn.	21 5	19 0	8 0	14 0
Memphis	19 5	17 0	8 0	12.0
Chattanooga	21 0	18 5	8 0	13 5
Nashville	20 5	18 0	8 0	11 5
Bristol	20.25	19.0	8.0	14.5

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax.

Standard of La. has transferred all stations to dealers except in New Orleans and Baton Rouge where station prices are 24 and 22 cents per gallon, respectively.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one delivery takes posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon.

Louisiana kerosene prices include 1 cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wag. dlr.	Tank car con'r.	Inc. tax	tank-wag.
Philadelphia, Pa.	14 0	12 5	5 0	10 5
Pittsburgh	15 5	13 5	5 0	11 0
Allentown	15 0	13 5	5 0	11.0
Erie	14 5	13 0	5 0	10 0
Scranton	15 0	13 5	5 0	11.0
Altoona	15 5	13.5	5 0	11.0
Dover, Del.	14 5	....	5 0	11.0
Wilmington	14 5	....	5 0	11.0
Springf'd, Mass.	13 3	....	4 0	9 0
Worcester	14 8	....	4 0	9.0
Hartford, Conn.	14 1	....	4 0	9 0
New Haven	14 0	....	4 0	9 0
Providence, R. I.	14.0	....	4.0	8.5

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers in Pennsylvania and Delaware, effective March 11, 1937: Consumers under contract using 100,000 gallons or more per year full compartment hose deliveries, tankcar plus .5 cent. Consumers under contract using less than 100,000 gallons per year compartment hose deliveries, undivided dealer price. Consumers under contract less than full compartment delivery, consumers not under contract less than full compartment delivery, and consumers not under contract full compartment delivery, divided dealer price. Less than 25 gallons, tank-wagon delivery, 4 cents per gallon above undivided dealer price.

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15 7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b Chicago. Each price subject to discount of 1 cent per gallon for 150 gallon lots if covered by contract.

Canada*

3 Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wag.
Halifax, N.S.	24.0	8 0	18.5
St. John, N.B.	24.0	8 0	18.5
Montreal, Que.	21 0	6 0	17.5
Toronto, Ont.	22.0	6 0	17.0
Hamilton, Ont.	22.0	6 0	17.0
Winnipeg, Man.	28 2	7.0	20.7
Brandon, Man.	29 8	7 0	22 8
Regina, Sask.	29.5	7 0	22.0
Saskatoon, Sask.	32.3	7.0	24.8
Edmonton, Alta.	29 5	7.0	24.2
Calgary, Alta.	27 0	7.0	21.5
Vancouver, B.C.	23 0	7.0	23.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon price. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Retail Price Changes

Continental Oil Co. September 15 reduced tank-wagon kerosene 1 cent in Tulsa.

Standard Oil Co. of Louisiana September 20 advanced tank-wagon kerosene .5 cent in Nashville.

Atlantic Refining Co. September 2 reduced tankcar and dealer gasoline .5 cent in Philadelphia; August 26 reduced dealer gasoline 1 cent in Springfield; August 27 reduced dealer gasoline .5 cent in Hartford.

Alberta Well

On the Battleview anticline in east-central Alberta, Battleview Oils No. 1, NW quarter section 34-47-5w4, has an estimated flow of 20,000,000 feet a day with pressure of 190 pounds open flow on a 3-inch pipe. The gas will be tested for naphtha content, and the hole may later be deepened to a potential oil sand. The Battleview structure is about 23 miles northeast of Wainwright.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of September 28, 1937

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 oct. and below (3d gr.)		.05
63-66 octane	.05⅜	.05½
67-69 octane	.05⅝	.05⅞
70-72 octane (regular)		.06
60-62 400 grades:		
62 oct. and below (3d. gr.)		.05
63-66 octane	.05⅜	.05½
67-69 octane	.05⅝	.05⅞
70-72 octane (regular)		.06
64-66 375	.05	.05¼
68-70 360	.05⅛	.05⅜

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below		.05
63-66 octane	.05⅜	.05½
67-69 octane	.05⅝	.05⅞
70-72 octane (regular)		.06
60-62 400		.05
64-66 375	.05	.05¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:		
62 octane and below		.05½
63-66 octane	.05¾	.06
67-69 octane	.06⅛	.06⅜
70-72 octane (regular)		.06½

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:		
62 octane and below		.05½
63-66 octane		.06
67-69 octane	.06⅛	.06⅜
70-72 octane (regular)		.06½

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.05	.05½
63-66 octane	.05⅜	.05½
67-69 octane	.05⅝	.05⅞
70-72 octane (regular)	.06	.06⅛
60-62 400 grades:		
62 octane and below	.05	.05½
63-66 octane	.05⅜	.05½
67-69 octane	.05⅝	.05⅞
70-72 octane (regular)	.06	.06⅛
64-66 375	.05	.05½
68-70 360	.05⅛	.05⅜

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane	.06	.06⅛
60-64.9 octane	.07⅜	.07⅝
65-70 octane	.07½	.07¾
64-66 375	.06½	.06¾
68-70 350	.06¼	.06⅝

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07½	.08½
58-60 400, 65 oct. and higher	.08¼	.09¼

EAST COAST (domestic)—

U. S. Motor below 60 octane:		
*New York (Bayonne)		.07¼
Baltimore		.07¼
U. S. Motor, 60-64.9 octane:		
*New York (Bayonne)	.07½	.07¾
Philadelphia	.07½	.07¾
Boston		.07¾
Baltimore	.07½	.07¾
Charleston, S. C.		.07¾
U. S. Motor, 65 and above:		
*New York (Bayonne)	.08	.08½
Philadelphia	.07¾	.08¼
Boston	.08	.08½
Baltimore		.08
Charleston, S. C.		.08

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:	
Below 60 octane	.06½
60-64.9	.06¼
65 octane and higher	.06¼

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05¾	.06
52-54 450 (blending)	.05¾	.06
54-56 450 (blending)	.05⅞	.06⅛

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.04½
Grade 18-55	.05⅝	.05½

NORTH TEXAS—

Grade 26-70		.04½
Grade 18-55	.05⅝	.05½

CALIFORNIA—

75-85 375-390	.06¾	.07½

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.04⅝	.04¾

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.04	.04¼
41-43 gr., 300-350 i.b.p., 110-125 flash, 500-520 e.p.	.04⅝	.04⅝
46-48 gr., 210-230 i.b.p., 480 max. e.p.	.04¾	.04⅞

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.04¼	.04¼
42-44	.04¼	.04½

NORTH TEXAS—

41-43	.04¼	.04⅜

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43		.04½

ARKANSAS (Ark., N. La., Miss. del.)—

41-43		.04¾

PENNSYLVANIA (inland refineries)—

45	.05¼	.05⅜
46	.05⅝	.05½
47	.05½	.05⅝

CHICAGO (Based on Group 3)—

41-43	.04	.04¼
42-44	.04¼	.04½

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04¾	.06

NEW YORK (Bayonne, N. J.)—

41-43	.05½	.05¾

***GULF COAST (domestic)—**

41-43		.05¼

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.04	.04½
No. 1 straw, 38-40	.03¾	.03⅞
No. 2 straw, 32-36		.03¾
No. 2 dark, 32-36	.03½	.03⅝
No. 3 zero to 15, 28-32	.03½	.03¾
No. 3, 15 and above, 28-32	.02⅝	.02¾

NORTH TEXAS—

No. 1 prime white, 38-42		.04
No. 1 straw, 38-40	.03⅝	.03¾

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03½	.03⅝

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36		.03¾

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-40	.04	.04½
No. 1 straw, 38-40	.03¾	.03⅞
No. 2 straw, 32-36	.03⅝	.03¾
No. 2 dark, 32-36	.03⅝	.03½
No. 3, zero to 15, 28-32	.03¼	.03⅜
No. 3, 15 and above, 28-32	.02¾	.03

NEW YORK (Bayonne, N. J.)—

*No. 1		.05¾
*No. 2	.05⅝	.05⅞
*No. 4	.05⅛	.05⅜

*Barge deliveries one-eighth to one-fourth cent under above tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal.; fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.03⅛	.03⅜
No. 4, low cold test, 24-28	1.05	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.85	.90
Below 18 fuel oil, industrial	.80	.85

NORTH TEXAS—

U.G.I. gas oil	.03	.03⅛
No. 4, low cold test, 24-28	1.05	1.12½
No. 5, low cold test, 18-22	.80	.82½
Below 18 fuel oil, industrial	.80	.85

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

10-14 fuel oil, industrial	.80	.85

CHICAGO (based on Group 3)—

U.G.I. gas oil	.03	.03⅛
No. 4, low cold test, 24-28	1.07½	1.12½
No. 4, 15 and above, 24-28	.90	.95
No. 5, low cold test, 18-22	.85	.90
No. 6, low cold test, 10-16	.80	.85

PENNSYLVANIA (inland refineries)—

36-40	.04½	.04⅝

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	1.25	1.40
24 plus diesel, per bbl.	1.15	1.40
24 plus diesel (bunkers)	1.55	1.65
12-16 (bunkers at tidewater)	1.05	1.20
10-16 (cargo lots)	.90	1.15
12-17 (tankcars)	1.00	1.15
10-17 (high sulfur)	.55	.95
San Joaquin Valley:		
10-18 (tankcars)	.75	1.00
24 plus diesel, per bbl.	1.30	1.50
San Francisco:		
27 plus diesel		1.50
24 plus diesel (bunkers)		1.70
10-16 (bunkers)		1.20

GULF COAST—

28-30 gas oil	.04¼	.04⅜
28-30 diesel (bunkers)		1.90
Bunkers (bulk cargoes)		.90
Bunker C (bunkers)		1.05

NEW YORK (Bayonne N. J.)—

27 plus, gas oil		.04¾
28-30 diesel (lighterage 6¼c per bbl.)		2.20
28-30 diesel (tankcars)		.05
Bunker C (to ocean-going ships in N. Y. harbor)	1.35	1.50
Industrial fuel (tankcars)		.04½

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

Bright Stocks:		
190-200 D, 15-25		.20
150-160 D, 0-10		.17
150-160 D, 15-25		.16½
150-160 E, 15-25		.16
100-110 D, 0-10		.15
Steam refined:		
631 green (treated)		.15½
600 dark green (untreated)		.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):		
10 pour test	.21	.22
15 pour test	.20	.21
20 pour test	.19	.20
25 pour test	.18	.19
Steam refined:		
600	.12¾	.13½
650	.16½	.17
600 Pennsylvania flash	.17½	.18
630 flash	.21½	.22
600 Warren E filtered	.16¾	.17¼

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:	
150-3	.09
180-3	.10
180-4	.09½
200-3	.10½
200-4	.10
250-3	.11½
250-4	.11
280-3	.12½
280-4	.12
300-3½	.13
400-3½	.14
100-2½ paraffin oil	.06
15-20 Cold Test:	
200-3	.10
200-4	.09½
250-3	.11
250-4	.10½
280-3	.12
280-4	.11½

GULF COAST—

Pale Oils:		
200-3	.07	.07¼
300-3	.07¼	.07¾
500-3½	.08½	.08¾
750-3½	.08⅝	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red Oils:		
200-5-6	.07¼	.07½
300-5-6	.07¼	.07½
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)—

Pale Oils:		
100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07¼	.08
450-3-4	.07¼	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red Oils:		
200-4-5	.07¼	.08
300-5-6	.07¼	.08
350-5-6	.09¼	.11½
400-5-6	.09¼	.11½
450-5-6	.09¼	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11¾
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11½
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 70° F. color, 400-405 flash:		
Zero pour test	.22½	.23
10 pour test	.21½	.22
15 pour test	.21	.21½
25 pour test	.20	.20½
180 vis. at 70° F., 3 color:		
25 pour test	.23	.23½
200 vis. at 70° F., 3 color:		
Zero pour test	.27	.27½
10 pour test	.26	.26½
15 pour test	.25½	.26
25 pour test	.24½	.25

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale		.03

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0290	.0295
124-126 (a.m.p.) w.c. scale	.0295	.0300

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0295	.0300
124-126 (a.m.p.) y.s	.0265	.0280
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06¾
Snow white	.07¾	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.06⅛
60-62 400		.06¼
61-63 390	.06⅛	.06¼
64-66 375		.06⅜

LOS ANGELES—

U. S. Motor grades:		
55-65 octane		.04¾
65-67 octane		.05
67-69 octane		.05¼
Above 69 octane	.05¾	.06¼

KEROSENE

GULF COAST—

41-43 prime white		.04⅞
41-43 water white		.05⅛
44 water white		.05⅜

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.22½	.24½
600 S.R. unfiltered	.20½	.21
630 S.R. unfiltered	.23½	.24
600 flash, S.R.	.24	.24½
630 flash, S.R.	.28½	.29
Bright Stocks:		
8 color	.32	.32½
6½ plus color in dilution	.31½	.32

NEUTRAL OIL

200-3 color	.31	.31½
150-3 color	.27	.27½

PARAFFIN WAX

NEW YORK (prices per pound)—

123-126 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0295	.0300
124-126 y.s.	.0265	.0280

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 28, 1937)

East Texas (May 22, 1937)*	$1 35
Van, Tex.†	1.10
Camp Hill, Tex.	1.27
Cass County, Tex.‡	1.25
Talco	.73
Altus and Tipton, Okla.§	1.20
Other fields (see gravity table).	

*All companies. †Humble Oil & Refining Co.; Pure Oil Co. ‡Texas Co. §Gulf Oil Co. Talco by Humble Oil & Refining Co.

West Texas

See gravity table.

Pecos County*	.91
Pecos shallow†	.81

*Shell Petroleum Corp., Gulf Pipe Line Co., and Humble Oil & Refining Co. †Shell Petroleum Corp.

Rocky Mountain States

(Effective January 28, 1937)

Iles, Colo., light*	$1 18
Iles, Colo., heavy*	1 12
Greybull, Wyo.*	1 30
Torchlight, Wyo.*	1.30
Grass Creek, Wyo., light*†	1.30
Grass Creek, Wyo., heavy (Nov. 4, 1936)*†	.62
Hamilton Dome, Wyo. (Nov. 4, 1936)*	.57
Elk Basin, Wyo., light*†	1.30
Frannie, Wyo., heavy*	.62
Frannie, Wyo., light	.82
Hogback, N. Mex.*	1 33
Pondera, Mont. (Jan. 26, 1936)*	1.05
Salt Creek Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1 23
Rock Creek, Wyo.†	1.20½
Lea County, N. M. (see West Texas gravity table)	
Artesia, N. Mex.	.90
Maljamar, N. Mex.	.90
Canon City and Florence, Colo.	1.10
Florence, Colo.	.98
Lance Creek, Wyo.	.97
Sunburst, Mont. (June 5, 1936)	1.20
Cat Creek, Mont.	1.40
Cut Bank, Mont.	1.35

*Standard Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Gulf Coast

(January 28, 1937)

Choctaw and Darrow, La. See note below	
Clay Creek, Tex.	$1 00
Garden Island, La.	1 37
Cleveland, Tex.	1 27
Hardin, Tex.	1.15
Lafitte, La.	1.24
Livingston, Tex.	1.27
Welsh, La.	.98
Tepetate (La.) (Jan. 4, 1937)	1.12

Duval, Jim Hogg, Webb and Zapata counties, Texas, and Heyser and Placedo fields take Mirando gravity prices. Jennings, La., 5 cents lower than Gulf Coast prices on each degree. Segno, Texas, takes Gulf Refining Co.'s Gulf Coast prices. Choctaw and Darrow, Louisiana, posted for first time by Standard Oil Co. of Louisiana, start below 21 degrees at 90 cents, with 3-cent differential up to 25 gravity, then 2-cent differential up to 40 and above, $1.36.

Middle Western States

OHIO OIL CO.
(Effective January 28, 1937)

Lima	$1 25
Illinois	1.35
Princeton, Ind.	1.35
Midland, Mich. (July 23, 1937)*	1 27
West Branch, Mich. (July 22, 1937)	1 09
Buckeye (July 23, 1937)	1 24½
Arenac, Mich (July 1, 1937)	1.21
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River	1 42
Kentucky River	1.50
Western Kentucky	1.40

*Posted by Pure Oil Co.
Midland, Mich., price posted by Simrall Corp. and Pure Oil Co. includes Greendale, Porter, Beaverton, Crystal and equal grades. West Branch and Arenac by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Buckeye posted by Simrall Corp. and Pure Oil Co.

Southwest Texas

(January 28, 1937)

Pettus	1.37
Salt Flat, Darst Creek, Hilbig, Carroll Clark, Zoboroski	1 09
Luling	1.00
Lytton Springs	1.12

Saxet and Taft take same gravity table as Gulf Coast.

North Louisiana and Arkansas

Smackover, all grades	$ .90
Tullos and Urania	1.02
El Dorado East field	.90
Union County, Ark.	.90
Ouachita County, Ark.	.90

Eastern States

TIDE WATER PIPE LINE CO.
(Effective June 7, 1937)

Bradford, Pa.	$2 82
Allegany, N. Y.	2 82

SOUTH PENN OIL CO
(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2 82
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.57
Pennsylvania Grade Oil in Eureka Pipe Line lines	2 52
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.37
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Jan. 29, 1937)	1 42

PENNZOIL CO.
(Effective June 7, 1937)

Pennsylvania Grade Oil in National Transit Lines:	
Group A Includes Cochran, Franklin, Hamilton and Doolittle districts.	2 82
Group B Includes Tidioute district.	2 81
Group C Includes Turkey and Tidioute districts.	2 80
Group D Includes Bear Creek and Porkey districts.	2 79
Group E Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts. Price depends on lengths of pipe line haul to plant at Oil City.	2 76

PURE OIL CO.
(Effective June 7, 1937)

Cabin Creek, W. Va.	2 52
Bradford Hollow, W. Va.	2 52
Kelly Creek, W. Va.	2 52

Canada

Ontario (Sept. 9, 1933)*

Petrolia	$2 10
Oil Springs	2.17
Turner Valley, Alberta province (Dec. 16, 1936):†	
Clear naphtha	$2 60
Discolored naphtha, 65 gravity and higher	2 36
Discolored naphtha and crude oil, 40-40.9 gravity	1.55
Increasing 3 cents for each degree of gravity with top price for 64-64.9 gravity	2.27

These prices delivered field tankage.
*Imperial Oil, Ltd.
†Imperial Oil, Ltd., and Regal Oil & Refining Co. On crude oil alone British American Oil Co. posted above prices on December 9, 1936.

Mexico

Panuco*	$1.24

*In U. S. currency, f.o.b. ship, based on August spot market transactions.

Crude Prices by Gravities

	Oklahoma-Kansas	Oklahoma-Kansas	North and Central Texas	East Central Texas (Mexia district)	North Louisiana-Arkansas	Gray County, Texas	Hutchinson-Carson counties, Texas	Rodessa, Louisiana-Texas and Panola County, Texas	Conroe, Tomball, Raccoon Bend, Deep, Satsuma	Gulf Coast	Gulf Coast	Lea County, N. Mex. West Texas, except Pecos County.	Mirando district, Texas	Marion County, Texas	Refugio, Greta, Saxet, Taft, Texas	Anahuac, Flour Bluff, Dickson, Turtle Bay	White Castle, Louisiana	Iowa, Louisiana	Cayuga, Texas
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Bel. 18	....	....	....	....	....	....	....	....	....	$.90	....	....	....	....	....	....	....	$.90	....
13-18.9	....	....	....	....	....	....	....	....	....	.92	....	....	....	....	....	....	....	.92	....
19-19.9	....	....	....	....	....	....	....	....	....	.94	....	....	....	....	....	....	$.94	.94	....
20-20.9	....	....	....	....	....	....	....	....	....	.96	$.95	....	$.96	....	$1.01	....	.96	.96	....
21-21.9	....	....	....	....	....	....	....	....	....	.98	.98	....	.98	....	1.03	....	.98	.98	....
22-22.9	....	....	....	....	....	....	....	....	....	1.01	1.01	....	1.00	....	1.05	....	1.01	1.01	....
23-23.9	....	....	....	....	....	....	....	....	....	1.04	1.04	....	1.02	....	1.07	....	1.04	1.04	....
24-24.9	....	....	....	....	....	....	....	....	....	1.07	1.07	....	1.04	....	1.09	....	1.07	1.07	....
Bel. 25	....	$.98	....	....	$.90	....	....	$.93	....	....	....	....	....	$.90	....	....	....	....	$.88
25-25.9	....	1 00	....	....	.92	....	....	.95	....	1.10	1.10	$.78	1.06	.92	1.11	....	1.10	1.10	.90
26-26.9	....	1 02	....	....	.94	....	....	.97	....	1.13	1.13	.80	1.08	.94	1.13	....	1.13	1.13	.92
27-27.9	....	1 04	....	....	.96	....	....	.99	....	1.15	1.15	.82	1.10	.96	1.15	....	1.15	1.15	.94
28-28.9	....	1 06	....	....	.98	....	....	1.01	....	1.17	1.17	.84	1.12	.98	1.17	....	1.17	1.17	.96
Bel. 29	$1 06	....	$ 96	$1 03	....	....	....	....	$1.20	....	....	....	....	....	....	....	....	....	....
29-29.9	1 08	1 08	98	1 05	1 00	....	....	1 03	1.22	1.19	1.19	.86	1.14	1.00	1.19	....	1 19	1 19	.98
30-30.9	1 10	1 10	1 00	1 07	1 02	....	....	1 05	1.24	1.21	1.21	.88	1.16	1.02	1.21	$1.16	1.21	1.21	1 00
31-31.9	1 12	1 12	1 02	1 09	1 04	....	....	1.07	1.26	1.23	1.23	.90	1.18	1.04	1.23	1.18	1.23	1.23	1 02
32-32.9	1 14	1 14	1 04	1 11	1 06	....	....	1.09	1.28	1.25	1.25	.92	1.20	1.06	1.25	1.20	1.25	1.25	1 04
33-33.9	1 16	1 16	1 06	1 13	1 08	....	....	1.11	1.30	1.27	1.27	.94	1.22	1.08	1.27	1.22	1.27	1.27	1 06
34-34.9	1 18	1 18	1.08	1 15	1.10	....	....	1.13	1.32	1.29	1.29	.96	1.24	1.10	1.29	1.24	1.29	1.29	1.08
Bel. 35	....	....	....	....	....	$.96	$.91	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1 20	1 20	1 10	1 17	1.12	.98	.93	1.15	1.34	....	1.31	.98	1.26	1.12	1 31	1 26	1 29	1 29	....
36-36.9	1 22	1 22	1 12	1 19	1 14	1 00	.95	1.17	1.36	....	1.33	1.00	1.28	1.14	1 33	1 28	1 29	1 29	....
37-37.9	1 24	1 24	1 14	1 21	1 16	1 02	.97	1.19	1.38	....	1.35	1.02	1.30	1.16	1 35	1 30	1 29	1 29	....
38-38.9	1 26	1 26	1 16	1 23	1.18	1.04	.99	1.21	1.40	....	1.37	1.04	1.32	1.18	1 37	1 32	1 29	1 29	....
39-39.9	1 28	1 28	1 18	1 25	1.20	1.06	1.01	1.23	1 42	....	1 39	1.06	1.34	1 20	1 39	1.34	1 29	1 29	....
40,over	1 30	1 30	1.20	1.27	1.22	1.08	1.03	1.25	1.44	....	1.41	1.08	1.36	1.22	1.41	1.36	1.29	1.29	....

Column 1—Companies posting are Barnsdall, Bell, Champlin, Continental, Cushing, Derby, Dickey, Eason, El Dorado, Empire, Falcon, Globe, Gulf, Johnson, Kanotex, National, Phillips, White Eagle, Stanolind, Sunray, Texas, Sun, Vickers and Wilcox.
Column 2—Anderson & Prichard, Carter, Cosco, Deep Rock, Magnolia, Mid-Continent, Pure, Rock Island, Shell, Sinclair, Skelly and Tide Water.
Column 3—All purchasers.
Column 4—Humble Oil & Refining Co. and Sinclair Oil Purchasing Co.
Columns 5, 6, 7 and 8—All purchasers.
Column 9—Humble Oil & Refining Co. and Sun Oil Co. Tide Water Oil Co.'s schedule starts at 35 degrees, $1.34 with 2-cent spread up to 40 and over at $1.44. (Raccoon Bend prices are for deep sand oil.)
Column 10—The Texas Co. (Gulf Refining Co. pays same prices up to and including 34 gravity, but continues its 2-cent spread up to 40 and over at $1.41.)
Column 11—Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Sun Oil Co.
Column 12—All purchasers.
Column 13—All purchasers (effective July 6, 1937).
Column 14—Magnolia Petroleum Co.
Column 15—Humble Oil & Refining Co. (effective July 6, 1937).
Column 16—Humble Oil & Refining Co. prices start at 30-30.9 gravity at $1.16 adding 2 cents for each degree upward to and including 40 and over at $1.36.
Columns 17 and 18—Shell Petroleum Corp.
Column 19—Tide Water Oil Co.

Canadian Fields

(Continued from Page 99)

7w5, is below 3,317 feet after encountering a heavy additional gas flow in the Devonian limestone at 3,300 feet. The formation is a gray-buff lime with little porosity.

On the Birch Ridge structure, Elbow Oils No. 1, LSD 11, section 35-22-5w5, entered the brown sand at 5,185 feet and is deepening. Casing will be set and a production test made before going on to the lime.

East Side Drilling

On the New Valley structure, northeast of Turner Valley, McLeod Oil Co. No. 1, LSD 4, section 6-21-2w5, is fishing for lost bailer at 8,462 feet.

On the Calling Valley structure, Sentinel Oil Co. No. 1, LSD 1, section 8-20-2w5, is installing control head before deepening from 5,850 feet.

Moose Dome Operations

On the Moose dome, west of Calgary, Moose Oils No. 2, LSD 8, section 29-22-6w5, has insufficient gas pressure to lift the crude, and is being placed on the pump. The well, bottoming in the Devonian limestone at 1,552 feet, has a potential production estimated 50 bbls. a day or better.

Pouce Coupe Prospect

In the northern Alberta foothills, west of Peace River and close to the British Columbia boundary, Guardian Oil Co. of Calgary is preparing for a deep test in section 13-8-13w6. A test drilled about 14 years ago by the Northwest Co., subsidiary of Imperial Oil, Ltd., in the adjacent section 23, encountered a gas flow estimated at 10,000,000 feet a day at 1,673 feet and four other gas sands between 1,690 and 2,733 feet. It is planned to carry Guardian No. 1 down 4,000 feet or more for a test of the Dakota, Triassic and Devonian oil horizons. Officers of the company are: President, James I. Hill; vice president, Edward R. Lovewell; treasurer, Melville J. Howey; secretary, John J. O'Connor; directors, Goldwin C. Hill; all of Calgary.

Taber Field

In the Taber field, southern Alberta, Plains Petroleum Corp. No. 1, LSD 14, section 29-9-17w4, is drilling out cement at 3,310 feet for a test of production from the Ellis sand. Plains Petroleum No. 2, LSD 11, section 25-9-17w4, is below 2,720 feet. Plains Petroleums No. 3, section 26-9-17w4, is below 2,780 feet.

North Taber Exploration Co. of Vancouver, British Columbia, has finished three structure tests, obtaining satisfactory markers. No. 2 test got a gas flow at 96 feet which burned 8 feet above the 8-inch casing and will be used for drilling fuel. It is expected to finish core-drilling operations and start No. 1 commercial test early in October.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1937 High	1937 Low	Week ending Sept. 25 Sales	Week ending Sept. 25 High	Week ending Sept. 25 Low	Week ending Sept. 25 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
114⅞	67½	4,700	74	67½	68	Amerada Corp.	788,675	N.P.	50cQ	7-31-37	$2.00	125½	75	80	48½
37	23	12,200	25¼	23	23⅛	Atlantic Refining	2,664,000	$25	25cQ	9-15-37	1.25	35⅛	26⅝	28	20⅛
43⅜	17⅝	8,100	22⅜	17⅝	17¾	Barber Co.	387,149	$10	25c.	6-1-37	.50	38½	21	22½	11⅜
35¼	16⅞	16,500	19½	17	17	Barnsdall Oil Co.	2,247,974	$5	25cQ	8-2-37	.80	28¼	14⅛	14⅜	5⅞
20⅞	9	74,000	10⅝	9	9	Columbia Gas & Elec.	11,610,036	N.P.	20c	5-15-37	.40	23⅜	14	15¾	3⅜
17⅞	11⅛	48,300	12⅜	11⅛	11⅛	Consolidated Oil Corp.	13,919,417	N.P.	20cQ	11-15-37	.80	17¼	11½	12¼	6½
49	36½	14,800	39¾	36½	36½	Continental Oil of Delaware	4,682,615	$5	50cQ†	9-30-37	1.50	44⅞	28½	35	15⅛
17⅝	8⅞	25,700	11	8⅞	8⅞	Houston Oil (new)	1,098,618	$25		10-17-30	....	13⅞	6⅜	7	1½
35⅜	21	12,500	25	21	22¼	Mid-Continent Petroleum	1,855,912	$10	50cSA	6-15-37	1.15	30⅞	17¼	20½	9½
34	18½	2,000	20¼	18½	18½	Mission Corporation	1,399,345	N.P.	1.00	6-15-37	.45	29⅞	16¾	17¾	10⅜
41⅜	24	23,900	28½	24⅞	25	National Supply of Delaware	382,591	$25		5-15-31	....	75½	19⅞	20⅞	9
22⅞	14⅛	22,000	16⅜	14⅛	14⅛	Ohio Oil Co.	6,563,377	N.P.	50cSA	6-15-37	.60	18	12⅛	14¼	9¼
29¾	16	1,900	18	16	16¼	Pacific Western Oil	1,000,000	N.P.	65c	12-18-36	.65	23½	11¾	14	6¾
4½	1⅜	1,900	1⅝	1⅜	1⅝	Panhandle P. & R.	198,770	N.P.	....	.....	....	4¼	1⅜	1⅞	½
64	45	25,600	50½	45	45	Phillips Petroleum	4,449,052	N.P.	75cQ†	9-1-37	2.50	52⅝	38⅛	40	13⅝
29⅞	18	8,200	20⅞	18	18	Plymouth Oil Co.	1,050,000	$5	35cQ	9-30-37	.90	27¾	11⅞	13	6½
24⅜	14¼	63,800	16	14¼	14¼	Pure Oil Co.	3,281,120	N.P.	....	9-1-30	....	24⅞	16	17	5⅞
54⅛	26¼	4,500	29⅜	26¼	28	Seaboard Oil of Delaware	1,224,283	N.P.	25cQ	9-15-37	1.00	44	30½	36⅞	20¾
34⅜	19½	14,300	22½	19½	19⅝	Shell Union Oil	13,070,625	N.P.	50c	7-15-37	.25	28¼	14⅜	16½	5½
105⅜	102	600	104½	103¼	103¼	Shell Union Oil 5½% pfd.	343,500	$100	$1.37½Q	10-1-37	28.87½	127½	102	111	63⅛
4¼	3	500	3¼	3	3	Simms Petroleum	461,698	$10	50c liq.	8-3-37	2.25 liq.	6¾	3½	18¾	4¾
60⅝	34¾	8,800	40	34¾	36	Skelly Oil	1,006,348	$15	50c	9-30-37	....	47⅜	19½	20½	6½
23¼	16¼	79,700	18¾	16¾	17⅛	Socony-Vacuum	31,151,071	$15	25cSA	9-15-37	.70	17½	12½	15¾	10⅝
50	36⅝	25,900	38⅞	36⅝	36¾	Standard Oil of California	13,014,754	N.P.	45cQ†	9-15-37	1.20	47⅝	35	41⅛	27¾
50	37	13,200	40½	37	37¼	Standard Oil (Indiana)	15,196,241	$25	50cQ†	9-15-37	2.40	48½	32¾	33⅜	23
36½	30⅝	100	35½	35½	35½	Standard Oil of Kansas	134,841	$10	$1	12-26-36	1.00	31	25	32	20
76	54¾	28,600	58⅝	54¾	54¾	Standard Oil of New Jersey	25,856,081	$25	$1.25SA†	6-15-37	2.00	70⅜	51⅛	52⅜	35⅝
77½	64	1,800	64⅝	64	64	Sun Oil	2,156,825	N.P.	25cQ	9-15-37	$1 & 6% Sk.	91	70	77	60½
65⅛	45	55,700	50⅞	45	45	Texas Corp.	10,896,858	$25	50cQ	10-1-37	1.50	55¼	28⅞	30¼	16½
9⅝	4⅜	14,600	5⅜	4⅜	4⅜	Texas Gulf Producing Co.	888,131	N.P.	5c	12-15-36	.05	8⅞	4⅜	4⅜	2½
16⅝	9⅝	11,500	11⅜	10	10	Texas Pacific Coal & Oil	888,237	$10	10c	9-1-37	.25	15¼	7½	9¼	3¼
21⅝	15⅜	24,200	17¼	15½	16	Tide Water Associated	6,288,512	N.P.	35cQ†	9-1-37	.70	21¾	14¾	15⅞	7⅝
28¼	20⅛	9,200	22⅜	20⅛	20¼	Union Oil of California	4,386,070	$25	30cQ	8-10-37	1.00	28½	20¾	24	14⅜
31½	24½	1,500	25⅜	24½	24½	Union Tank Car Co.	1,200,000	N.P.	40cQ	9-1-37	1.20	31⅝	22⅝	26½	20⅞
6¼	2⅜	2,300	3⅛	2⅜	2⅜	Wilcox Oil & Gas	424,839	$5	....	5-10-28	...	5¼	2⅜	3⅛	1

*Ex-dividend. †Includes extras.

New York Curb Exchange

1937 High	1937 Low	Week ending Sept. 25 Sales	Week ending Sept. 25 High	Week ending Sept. 25 Low	Week ending Sept. 25 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1936	1936 High	1936 Low	1935 High	1935 Low
21⅜	11⅝	4,100	14½	11⅝	12	Bridgeport Machine Co.	260,000	N.P.	25c	6-30-37	$1.00	21	13¼	14⅛	3⅜
51½	45	200	48	46¼	47	Buckeye Pipe Line Co.	200,000	$50	$1Q	9-15-37	3.25	50	39¾	42½	30½
2¾	1	8,000	1⅜	1	1⅛	Carib Syndicate	799,020	25c	....	.....	....	4⅞	1⅞	4¼	1⅝
123	100	550	108	100	100	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	9-30-37	7.00	124¾	105	157	115
5⅜	2¼	97,200	2½	2⅛	2⅛	Cities Service	37,804,394	N.P.	....	6-1-32	....	7⅜	3	3¼	¾
5½	2⅝	7,700	3⅝	2⅝	3	Cosden Petroleum	399,687	$1	....	.....	....	4½	1½	1½	¼
38¾	23	8,700	29¾	23	24	Creole Petroleum	6,974,356	$5	50cSA†	6-10-37	.50	39	19⅞	23¾	10
18⅝	9¼	2,000	10⅛	9¼	9¼	Darby Petroleum	351,390	$5	25cSA	7-15-37	.50	18⅛	9	8⅞	4
8⅜	4⅝	2,700	6	4⅝	4⅝	Derby Oil & Refining	263,162	N.P.	....	.....	....	6¾	1⅞	2	¾
47½	29	No sales	..	..	..	Eureka Pipe Line	50,000	$50	$1Q	8-2-37	4.00	47½	38½	38	33¼
63½	44⅛	10,800	49	42½	44	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-37	1.50, 100% Stk.	59	36	74¾	50¼
87	68	5,300	73⅝	68	69	Humble Oil & Refining	8,923,935	N.P.	62½cQ	10-1-37	1.50	80	57	64	44
24¼	18¼	4,200	21⅛	18¼	18½	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-37	1.25	24½	19¾	22½	15⅝
15	7¾	500	8¼	7¾	8	Indiana Pipe Line	300,000	$10	30cSA	5-15-37	.80	9¾	5½	6⅛	3⅝
39½	29¾	5,300	32¼	30¼	30¼	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-37	2.50	39⅝	32⅝	39¾	28
15¼	8¼	17,000	9¾	8¼	8¼	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	9-15-37	.50	15⅝	9⅞	11⅜	4⅜
34	16⅛	6,500	25	21½	22	Lion Oil Refining	270,000	N.P.	25cQ	10-20-37	.75	17⅜	7⅜	8⅛	3½
14¼	8⅜	8,600	9¼	8⅜	8⅜	Lone Star Gas	5,382,723	N.P.	20c	8-21-37	.60	14¼	9⅞	10⅞	4½
14⅝	8¼	2,500	8¾	8¼	8¼	Midwest Oil Co.	998,444	$10	50c	6-15-37	....	..	..	..	..
7⅞	5⅛	2,000	5⅝	5⅛	5¼	Mountain Producers	1,682,182	$10	30cSA	6-15-37	.60	8⅝	5	5¾	4⅛
19½	13⅞	5,800	14½	13⅞	13⅞	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-37	1.00	23	17⅜	20	11¾
12½	8	1,000	9⅜	8½	9	National Transit	509,000	$12.50	45cSA	6-15-37	.75	15¾	9¼	10⅝	6¾
6⅛	4¼	No sales	..	..	..	New Bradford Oil	1,445,202	$5	15cSA	4-15-37	.10	4⅝	2⅞	3¼	2
5	1¾	1,100	2	1¾	1¾	New Mexico and Arizona	1,000,000	$1	1c	12-1-36	.01	6⅝	1⅝	2½	1
5⅜	4¼	100	4¼	4¼	4¼	New York Transit	100,000	$5	15cSA	4-15-37	.35	6¼	4¼	4⅞	3
12¾	7½	200	7⅝	7⅝	7⅝	Northern Pipe Line	120,000	$10	40c	6-1-37	.40	9¾	4⅞	8	5¼
9⅝	5	34,900	6¼	5	5	Pantepec Oil	1,608,700	N.P.	....	.....	....	10⅛	3¼	4⅜	1¼
13¾	4¼	2,400	5⅜	4¼	4½	Root Petroleum Co.	336,045	$1	25c	11-2-36	.50	19¼	4½	5	1½
6½	3¼	3,100	3⅞	3¼	3¼	Ryan Consolidated	296,931	N.P.	....	.. ..	....	4¾	1⅞	2½	⅝
56	42	1,000	45¾	44	44	South Penn Oil	1,000,000	$25	$1.15Q†	9-30-37	2.60	44	32½	34½	21⅝
7¼	4⅞	200	5	5	5	Southern Pipe Line	100,000	$10	25cSA	9-1-37	.25	7⅞	3¼	5	3⅞
42	26	100	26	26	26	South West Penna. Pipe Lines	35,000	$50	50cQ	7-1-37	13.00	60	44	56	44¼
21⅛	18⅛	3,100	19	18⅛	18⅛	Standard Oil of Kentucky	2,604,790	$10	40cQ†	9-15-37	1.35	23⅜	17⅛	24	18
13¾	8⅞	No sales	..	..	..	Standard Oil of Nebraska	188,403	$25	25c	3-29-37	.25	14⅝	11	12	7¾
45	27	1,500	30⅞	27	27	Standard Oil of Ohio	753,740	$25	25cQ	9-15-37	2.00	40	21¾	23⅝	11½
4⅞	3¼	13,400	3¾	3¼	3⅝	Sunray Oil	1,910,119	$1	10c	8-20-37	.10	5	2⅝	2⅞	⅞
7⅝	4½	2,200	5	4⅜	4⅜	Texon Oil & Land	336,028	$2	15cQ	9-3-37	.60	9¾	5⅜	6⅞	5

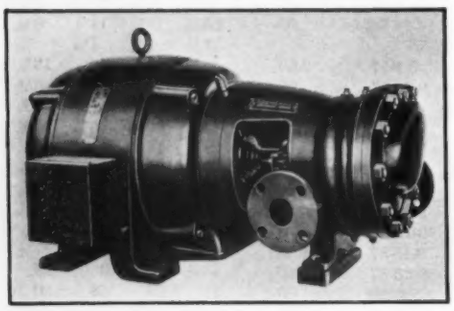
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW OR IMPROVED EQUIPMENT

Two-Stage Built-Together Pump Designed by Fairbanks-Morse

A two-stage built-together pump (pump and motor built together) has been developed by Fairbanks, Morse & Co., Chicago, Ill., to operate against heads up to 500 feet. In many applications it offers a less expensive alternative for multi-stage and split-case pumps, and its compactness and sturdiness qualify it for portable and semiportable as well as stationary service.



The new F-M pump is well adapted for all classes of general pumping service with liquids low in viscosity and free from excessive foreign matter. Because of its compact design, the pump is especially advantageous where space is limited. It consists essentially of a two-stage centrifugal pump, with enclosed bronze impellers, mounted directly on the shaft of an F-M splash-proof motor. Impellers for the two stages are placed back to back, compensating thrust. The first-stage unit is placed next to the motor and the second-stage on the outside, simplifying the cross-over passage and placing the stuffing box under suction instead of pressure. Further information on this new pump will be found in the company's Bulletin 5592.

Dresser's Michigan Representative

W. L. Shelgren, according to an announcement from S. R. Dresser Manufacturing Co., of Bradford, Pa., is now sales representative for Michigan (except Detroit). The Dresser company manufactures a complete line of flexible pipe couplings and pipeline repair devices. With an experience in pipe-joint engineering and knowledge gained with Dresser over a period of 11 years, Mr. Shelgren will be able to give gas, oil, and water companies in that territory the benefit of considerable experience in the solution of pipe-joint problems. His headquarters will be at the home office in Bradford, Pa.

Bulletins, Booklets and Other Literature for the Trade

A 16-page illustrated list-price catalog, No. 1,532, on friction clutches, has been completed by Link-Belt Co., Chicago, Philadelphia, San Francisco, and is available for distribution.

A 64-page handbook on Herculoy, a new copper-silicon alloy said to have the corrosion resistance of copper and the strength of steel, is being sent on request by Revere Copper & Brass, Inc., 230 Park Avenue, New York.

Helical pumping reducers for oil well service are described and illustrated in a 40-page booklet mailed on application to the Foote Brothers Gear & Machine Corp., 5301 South Western Boulevard, Chicago.

"Oil-Still Corrosion Checked by Ni-Rust" and "Alloy Iron Hot-Oil Pumps Resist Attack of Corrosive Crudes" are among the articles in the current issue of Nickel Cast Iron News, published by the International Nickel Co., Inc., 67 Wall Street, New York.

Catalog No. 12, ready for distribution by the Acme Fishing Tool Co., Parkersburg, W. Va., presents 90 pages of matter describing and illustrating fishing tools. The manufacturers believe no problem ever encountered through losing equipment in an oil-well hole has been overlooked in their array of devices for recovering the fish.

Bulletin 1,625, announced by the Griscom-Russell Co., 285 Madison Avenue, New York, contains information about K-fin and G-fin heat-transfer apparatus.

Among articles in the latest number of Baldwin-Southwark, published by the Baldwin-Southwark Corp., Philadelphia, Pa., is one which tells how an enlarged diesel plant was necessitated in Russell, Kans., by the rapid growth of that oil town.

In an eight-page color brochure, "Lux Makes the Difference," Walter Kidde & Co. shows what a built-in carbon dioxide fire protection system means where electrical or flammable liquid fire hazards are encountered.

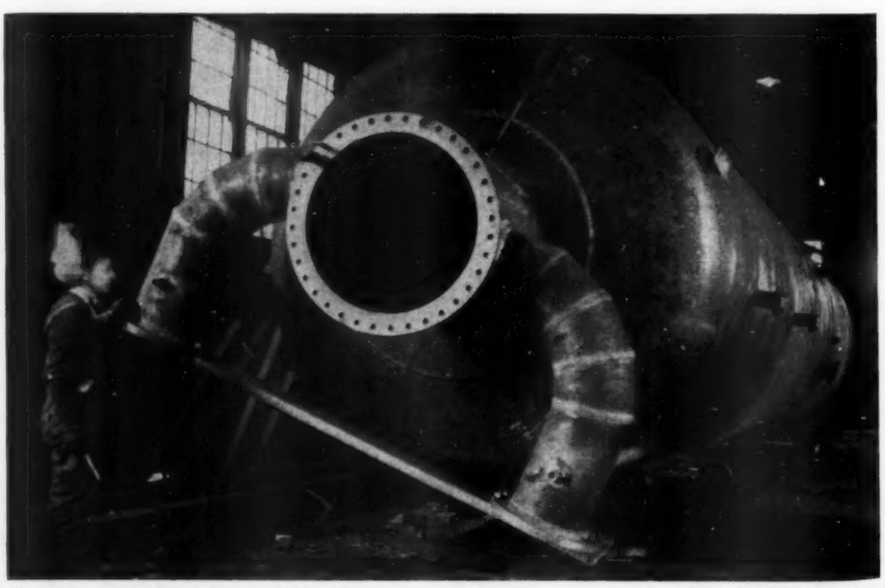
Drilling oil wells with "Caterpillar" diesel engines is the subject of a new booklet issued by Caterpillar Tractor Co., Peoria, Ill.

"Vulcan Boll-Weevil Zephyr" Is Addition to Williams Tongs

J. H. Williams & Co., 75 Spring Street, New York, announce a new addition to their line of chain pipe tongs known as "Vulcan Boll-Weevil Zephyr." The Zephyr has the same structural and utility features as the regular Vulcan Boll-Weevil, but is stronger and lighter, capacity for capacity. Like the regular Boll-Weevil, it is reversible in action and designed for flat pipe work and pipe line work. It is exceptionally efficient in trenches. Zephyr tongs are forged from special steel and heat-treated. They are equipped with the new Williams Superchain, made from alloy steel, heat-treated and cadmium-plated. Three sizes are available for pipe three-quarters inch to 12 inches. Handle and panel-in-jaw are finished in gray enamel.

Johnston Now General Manager

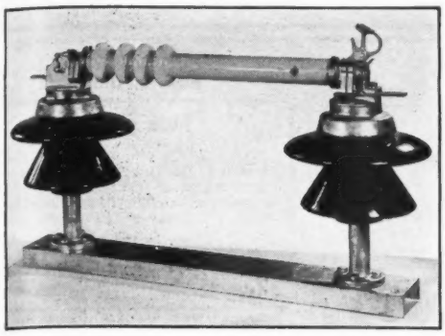
Blaine Johnston, formerly vice president of the Sims Oil Co. and chairman of the southwest district of the American Petroleum Institute, has been made secretary - treasurer and general manager of the Johnston Oil Field Service Corp., with headquarters in Houston, Tex. He will have direct supervision of formation and casing-testing operations in the Mid-Continent, Texas and Louisiana Gulf territories. Mr. Johnston started in the oil business as a roustabout in Spindletop field in 1904 and worked his way up to general superintendent for the White Oil Co. He then stepped up to vice president in charge of drilling and production for Sims, and also vice president of the T. J. Drilling Co. in Dallas, Tex.



The Graver Tank & Manufacturing Co., Chicago, produced this evaporator tower for the Chalmette Petroleum Corp., Chalmette, La. It is 9 feet 6 inches in diameter and 60 feet 9 inches high, constructed in accordance with A.P.I.-A.S.M.E. codes, 1936 edition.

Westinghouse Putting a New Power Fuse on Market

For service in medium-capacity generating stations and substations of all types, where the short-



circuit capacity does not exceed 600,000 three-phase Kv-a, a new 34.5 kv., 200-ampere disconnecting type BA "De-ion" power fuse is announced by the Westinghouse Electric & Manufacturing Co. This light-weight fuse can readily be lowered to the ground for inspection or refilling. The manufacturers say the complete operation of removing the fuse from service, refilling, and restoring service can be accomplished in less than one minute's time, which is of initial importance in cutting down outage time and loss of revenue.

The fuse is hinged at the lower contact to open approximately 75 degrees, for use as a disconnecting switch that can be operated by a standard hookstick. Magnetizing currents of a 750 Kv-a., three-phase transformer are easily interrupted, using this fuse as a disconnect. As with previously developed "De-ion" fuses, only inexpensive refills need be stocked for replacement.

Here and There With Men Who Manufacture Equipment

Appointment of R. D. McManigal as manager of the Central Station and Transportation division of the Westinghouse Electric International Co. is announced. He joined Westinghouse in 1915.

G. H. Murray, formerly chief petroleum engineer of the Shell Petroleum Corp., has joined the Schlumberger Well Surveying Corp. and assumed his duties at the Houston headquarters.

A branch warehouse of the American Iron & Machine Works Co., Oklahoma City has been opened in Clay City, Ill. Floyd Cailloux is manager.

Clark Bros. Co., Olean, N. Y., reports receipt of an order for seven 250-horsepower Super 2-cycle horizontal twin compressor units to be installed in the Edmond field of Oklahoma for gas booster service. It also reports an order for 15 250-horsepower twin cylinder Super 2-cycle horizontal gas-engine-driven compressors to be used in a natural gasoline plant in the same Edmond field.

Oliver United Filters, Inc., New York, Chicago and San Francisco, has appointed E. Corning Faber to its sales engineering staff. Mr. Faber was form erly associated with Filtration Engineers, Inc.

J. K. Ross, for many years southwestern manager in Dallas, Tex., and Tulsa for the Oil Insurance Association, has resigned that post to become manager of the oil insurance department of Cravens-Dargan & Co., insurance managers in Houston, Tex.

The Worthington Pump & Machinery Corp., Harrison, N. J., has appointed W. A. Neill manager of engineering and sales activities at its recently reopened plant in Holyoke, Mass, where portable compressors, rock drills, automotive compressors and vertical compressors are manufactured.

Eric G. Schroeder of the Kibele Manufacturing Co., Dallas, Tex., accompanied by Mrs. Schroeder, left for an extended automobile trip through Wyoming and California oil fields.

L. W. Browne, formerly president of the Fisher Governor Co., has joined the O. C. Keckley Co., Chicago, as vice president in charge of sales and distribution of steam and liquid control equipment.

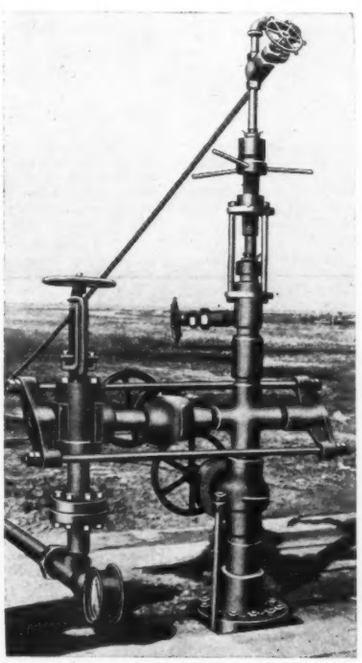
Al Cudlipp, advertising manager of the Lufkin Foundry & Machine Co., Lufkin, Tex., has returned from a 10-day business trip through North Texas and Oklahoma.

F. S. Spear has joined the Young Radiator Co. of Racine, Wis. He will supervise the production of Young products being supplied to the automotive, tractor, air-conditioning and heating industries.

New Oil-Well Flowing Device Developed by Acme Gas Lift

The Acme Gas Lift Co., 1421 Maury Street, Houston, Tex., has put on the market a new oil-well flowing device for producing oil where the pressure has dropped to the point where the desired amount of fluid cannot be produced without artificial lifting. It is not necessary to disturb the christmas tree except to install the Acme head. Nor is it necessary to erect a derrick over the well. The gas-lift is easy to install. A string of one-inch seamless pipe is run in the tubing and anchored at the desired depth by means of a slip anchor provided on the bottom of the string. Just above the anchor is a perforated nipple. Valves are made up in the line at any level or levels desired, usually every 500 feet.

The valves are opened or closed from the surface. The valve nearest the surface closes first as

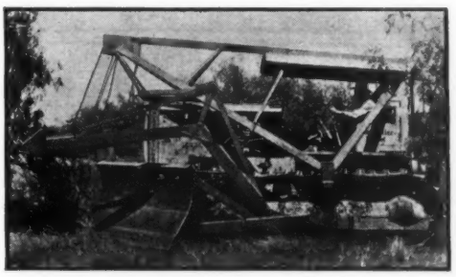


the tubing is lifted by a hand-screw jack. The other valves located at successive stages down the pipe close consecutively as more lift is made. Valves are opened by a reversal of the process and in a reversed order.

One man can handle the operation, since it is not necessary to have a crew to find the fluid level. Only small air compressors need be used as the annular space between the tubing and flow line is reduced considerably.

Treedozer Makes Short Work of Mesquite in Southwest

To meet the demand for a practical tractor-driven tool to clear mesquite-covered lands in



Texas, the spectacular-looking Treedozer has been placed on the market by R. G. LeTourneau, Inc., Peoria, Ill., and Stockton, Calif. Built for use with the "Caterpillar" RD8 tractor, the Treedozer consists of two principal parts, a projecting arm and a V-shaped cutting blade. Both are controlled by cable through a LeTourneau double-drum power control unit and can be operated independently of each other. The projecting arm pushes the tree over so as to expose the roots, and the cutting blade completes the uprooting and windrows the tree.

This new product is especially recommended by the manufacturer for use in clearing mesquite, brittle brush and cactus from oil fields for drilling and for the clearing of roadways. Contractors and ranchers in the American Southwest and Mexico report that 10 to 20 acres can be cleared daily with the Treedozer. Its ability to uproot and windrow all at once, rather than break off, pull out and pile, is the secret of its success in clearing land quickly and at low cost.

Cecil White Joins Waukesha

Cecil E. White has joined the sales staff of Waukesha Motor Co. gas power division. He will assist in the promotion of the new automatic power units as well as the Waukesha automatic DeLuxe gas power units. Mr. White will devote his time to sales promotion as well as sales work in the field. A graduate of the University of Wisconsin in 1921, his schooling and experience combine well to give him background for this new activity. His technical training consists of work as an instructor in agricultural engineering at the university and in automotive engineering at the American School of Correspondence in Chicago. He assisted in the revision of texts and a cyclopedia on automotive engineering as well as preparing a treatise on practical radio. Subsequent technical experience was gained as a service engineer for the Allis-Chalmers Manufacturing Co.

M.S.A. Salt Tablet Dispenser

Designed and built by the Mine Safety Appliances Co., Pittsburgh, Pa., is the new streamlined M.S.A. salt tablet dispenser, modern in appearance and construction. Made of molded black bakelite, the dispenser is weather-proof and may be installed anywhere. All metal parts are chromium-finished, will not corrode, and the unit stays clean at all times. This dispensing mechanism is simple, positive and foolproof in action. One hand only is required for operation. A turn of the large knob releases one tablet at a time directly in the palm of the workers' hand. Prevention of "heat sickness" by providing the worker with salt to renew the body-supply lost in excessive perspiration is more easily accomplished.

CLASSIFIED ADVERTISING

Leases and Drilling Blocks

PERMIAN BASIN
1,000 ACRE DRILLING BLOCK
Located on subsurface high between Howard-Glasscock and Mertzon, shallow pools of West Texas. Howard-Glasscock has produced 76,000,000 bbls. in last six years. Block is center of recent activity, both majors and independents taking leases, four wells will start next 30 to 60 days. Production possibilities evidenced by noticeable odor of gas escaping through fissures. Humble paid cash bonus for renewal of lease two miles northwest. Will give six-eighths of oil and gas for 2,600 ft. well.
ADDRESS
Box 1082, Austin, Texas.

NEW Texas Oil and Gas Leases. Large or small tracts for brokers and salesmen. State requirements. H. H. WHITE, P.O. Box 674, San Antonio, Texas.

WANT BROKER to handle commercial leases near deep test. Good geological location South Texas. Owner, Box 149, Belton, Texas.

SECURITY ABSTRACT COMPANY
El Dorado, Arkansas
Fee, Lease & Mineral Ownership on short notice. Ownership maps.

ILLINOIS
A complete weekly report on Illinois operations.
One month.....$5.00
Six months.....$25.00
Sample report on request.
OIL NEWS SERVICE
P. O. Box 146 Flora, Illinois

LEASES-ROYALTIES near Paluxy-Trinity sand test East Texas offer chance for quick money. E. CROFT, PROCTOR, TEX

ARKANSAS
Does not have any production (proration restrictions. The opportunity for quick "payouts" is obvious. Come here and investigate royalty and lease opportunities
WILLIAM MONROE LAYTON
P. O. Box 411 Texarkana, Ark

CAN FIND any oil structure that will produce when penetrated. P. O. Box 303 Tonkawa, Oklahoma.

$5.00 per acre for a one-fourth interest in 1,040 acres. Price $5.00 per acre. ELTON BECK, Herrick, Illinois.

320 A. PROVEN GAS. ⅛ working interest. Unlimited 8-cent market. I complete one well and assign all for $1,500.00. H. B. Buddenborg, Osawatomie, Kans.

HAVE 17,000-acre block that is believed over subsurface structure but will take geophysical survey to determine. Will make any reasonable deal with responsible party to develop. Address W. M. PRATHER, Oakley, Kansas.

New Mexico OIL LEASES WHOLESALE
40 acres at a time.
Roy G. Barton, Clovis, New Mexico.

WILL SELL oil lease and ½ royalty on NW quarter section of 14 T-11 R-12, Caddo County. MRS. W. E. TURPIN, Anderson, California, Route 1.

FOR SALE—A bargain if bought at once. Three small producing wells in 20-26-15, Nowata County. West Oil Co., Shawnee, Ok.

FOR SALE or exchange—Producing and distributing natural gas properties in western Missouri and eastern Kansas. Fine condition. Great development possibilities. Exchange for producing oil wells acceptable. LOUIS C. CYR, 45 Melrose St., Lawrence, Massachusetts.

OFFERING————DRILLING BLOCKS
40 acres tracts near tests.
SYDNOR'S OIL OFFICE
226 Bewley Bldg., Fort Worth, Texas

Specializing leases twenty acres up dollar acre, East Tex., La., S. Ark. Owners—Attorney, Box 1122, Little Rock, Arkansas.

Leases and Drilling Blocks

FOR SALE Oil producing leases with many locations yet to drill, leases for sale near production and wildcat leases for drilling contracts.
W. P. HARLEY
Bowling Green, Ky.

I OWN 3,000 acres free in N. Pittsburgh & Atoka Cos. 40 to 1,000 A. tracts, no trades. Cash sale, lease or royalty, $5 to $25 per A. Townsite on 2 R.RS. near production. J. E. Cavanaugh, Baker, Oregon.

HAVE MARKET for best production and oil properties in Kansas and elsewhere. Data, etc. Terms. Must stand investigation. Also best crude oil deal. Address Box H-975, The Oil and Gas Journal, Tulsa, Okla.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Royalties

Oil Royalties and Oil and Gas Leases
Bought and Sold
E. T. Marion
1109 Petroleum Building
Midland, Texas.

REPRESENTATION WANTED for Calif. Oil Royalties. California Oil Syndicate, Inc., 1541 N. Western, Los Angeles, Calif.

WANTED—A large and widely scattered spread of producing royalty. Also 10 to 20 acres royalty near several wells drilling on geophysical structure, by responsible operators. Cash ready quick action. Leonard Jones, 4172 Leimert Blvd., Los Angeles, Calif.

Oil Royalties and Leases Illinois Basin.
Write
Sam B. Raitman Olney, Ill.
226½ Main St. P. O. Box 229

DEEDED—N.W. Oklahoma oil royalties and leases, near drilling wells or hot spots. I will make U $. Small commission. ENID OIL ROYALTY CO., Enid, Oklahoma.

119 million ft. gasser in Sec. 10-9-25, Beckham County, Okla. Royalties with 1½ miles and closer to well. $50 per acre and up. Also choice leases. J. N. SWANSON, Sayre, Oklahoma.

FOR SALE—Royalty under and around new test well in SW¼, Section 26, Tp. 27, R. 22, Ford County, Kansas. Also commercial and drilling blocks and leases. GEO. T. RICKARD, Bucklin, Kansas.

Royalties

Brokers—Salesmen
Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Security and Exchange Commission. Inquiries invited.

B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

F. A. SANSOME
Maintains a Complete Trading Organization for Brokers, Banks and Dealers
in
Oil Royalties.
522 Fifth Avenue, New York, N. Y.

PRODUCING OIL ROYALTIES
15 years of experience.
L. H. WITWER
214 Kennedy Bldg., Tulsa, Okla.

FOR SALE—400 acres producing Osage field, Wyoming, 41° gravity paraffine base crude. Carries 12½% royalty. 25 bbls. daily settled production. 50 proven locations at 1400 feet. Deeper sands untested. W. M. Sayre, Osage, Wyo.

Patent Attorneys

JACK A. SCHLEY
PATENT LAWYER
Patents Obtained — infringement practice in all Courts—oil field experience. 1807-11 Tower Petroleum Bldg., Dallas. 2014 Second Nat'l. Bank Bldg., Houston. 707 Insurance Building, San Antonio. 433 Munsey Building, Washington, D. C. Address any of these offices.

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to any one, send for blank form:
"Evidence of Conception."
Instructions "How to Establish Your Rights" and complete information FREE
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

Help Wanted

GENERAL MANAGER WANTED
To take charge of drilling gas well building pipe lines and distribution systems, leasing more acreage. Investment of ten thousand required for substantial interest. Good salary. Address Box H-96 The Oil and Gas Journal, Tulsa, Okla.

FIELD SALESMAN who is now covering Oklahoma and Kansas. Established lines and outlets. Product sells to rotary rigs. Straight commission. Apply Box H-97 The Oil and Gas Journal, Tulsa, Oklahoma

Situations Wanted

ASSISTANT ENGINEER, Chief topographic draftsman formerly with U. S. Engineers, 15 years experience in Topographic, Aerial and Geologic mapping. Desire connection with large corporation in exploration or geologic Dept. U. S. A. or Foreign. Single, employed. Available on short notice. Interview can be arranged. Address Box H-956, The Oil and Gas Journal, Tulsa, Okla.

GRADUATE Civil Engineer, 1930, experienced in land acquisition, geodetic surveys and aerial photogrammetry; Texas and southwest. Licensed land surveyor. Now employed U. S. civil service; seeking position with increased responsibilities and opportunities. Adress Box H-951, The Oil and Gas Journal, Tulsa, Okla.

MAN experienced in land, leases, right-of-way, title and claim work. P. O. Box 1666, Beaumont, Texas.

REFINERY SUPERINTENDENT, 20 years skimming and cracking experience now employed, desires new surroundings. Address Box H-955. The Oil and Gas Journal, Tulsa, Okla.

EXPERT PILOT wants flying job with individual or concern. Will furnish my own plane or equip employer's plane with $1,000 worth of instruments, parachutes and two way radio. Address Box H-970, The Oil and Gas Journal, Tulsa, Oklahoma.

SALES ENGINEER
Mechanical Graduate—well versed in all drilling and production operations. Foreign and domestic experience. Widely known and respected. Backed by A-1 references. Address Box H-971, The Oil and Gas Journal, Tulsa, Oklahoma.

ACCOUNTANT — SYSTEM DESIGNER
20 years' experience oil and public utility accounting and budgeting; design of accounting and operating records and systems for hand and machine methods. Married, employed, desires position with increased responsibilities and opportunities. Interview arranged. Address Box H-97 The Oil and Gas Journal, Tulsa, Oklahoma

CONNECTION
WANTED in the oil industry with capitalist or responsible company as authorized representative, or in scouting for your Royalties or Leases. Living in Central Kansas. Dependable and integrity above reproach. References. Address Box H-976, The Oil and Gas Journal, Tulsa, Okla.

Mailing Lists

ROYALTY INVESTORS, by deed. Speculators in low priced leases. Both by states. Oil Industry Mailing List Co., Tulsa Loan Building, Tulsa, Oklahoma.

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes.

1 Inch	*1 time*	*$5.00*
1 Inch	*13 times*	*4.50 per inch*
1 Inch	*26 times*	*4.00 per inch*
1 Inch	*52 times*	*3.50 per inch*

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

CLASSIFIED

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgement is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.55*	*$3.30*	*7 Lines*	*$2.45*	*$4.20*	*$5.95*	*$7.70*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*	*9 Lines*	*3.15*	*5.40*	*7.65*	*9.90*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma